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Trawl Catch Statistics in Sockeye Rearing Lakes of the Fraser River Drainage Basin: 1975-1985

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Canadian Data Report of Fisheries and Aquatic Sciences

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by

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ABSTRACT

Mueller, C. W. and H. J. Enzenhofer. 1991. Trawl catch statistics in sockeye rearing lakes of the Fraser River drainage basin: 1975 - 1985. Can. Data Rep. Fish. Aquat. Sci. 825: 204 p.

Under the auspices of the International Pacific Salmon Fisheries Commission (IPSFC) 11 years of pelagic fish stock information were collected using midwater trawls in Fraser River sockeye rearing lakes. The lakes sampled were: Takla, Trembleur, Stuart, Francois, Fraser, Quesnel, Adams, Shuswap, Seton, Anderson, Lillooet, Pitt, Harrison, and Cultus. After at least one month in formalin each sample was measured and weighed. Summary statistics were calculated and length frequencies were plotted by survey and species. In Shuswap Lake, where most data were collected, mean weight of juvenile sockeye in October ranged from 1.79g in dominant brood years to 2.60g in sub-dominant years.

RÉSUMÉ

Mueller, C. W. and H. J. Enzenhofer. 1991. Trawl catch statistics in sockeye rearing lakes of the Fraser River drainage basin: 1975 - 1985. Can. Data Rep. Fish. Aquat. Sci. 825: 204 p.

Pendant onze ans, sous les auspices de la Commission internationale des pêcheries du saumon du Pacifique, des données sur les stocks de poissons pélagiques ont été recueillies dans les lacs d'alevinage de saumon rouge du fleuve Fraser, à l'aide de chaluts flottants. Les lacs échantillonnés étaient les lacs Takla, Trembleur, Stuart, François, Fraser, Quesnel, Adams, Shuswap, Seton, Anderson, Lillooet, Pitt, Harrison, et Cultus. Chaque échantillon a été conservé dans le formal pendant au moins un mois, au bout duquel il a été mesuré et pesé. Des statistiques sommaires ont été établies et la fréquence des longueurs a été précisée par dénombrement et par espèce. En octobre, le poids moyen des jeunes saumons rouges du lac Shuswap, où ont été recueillies la plupart des données, variait de 1,79g, pour les années de génération où l'espèce dominait, à 2,60g, pour les années où l'espèce était moins dominante.

Trawl catch statistics in sockeye rearing lakes of the Fraser River drainage basin: 1975 - 1985.

INTRODUCTION

The Fraser River drainage basin is 230,400 km^2 and covers most of south-central British Columbia (Servizi 1989) (Fig 1). It is one of the world's major salmonid systems and is the worlds largest single river producer of sockeye salmon (*Oncorhynchus nerka*) (Northcote and Larkin 1989). Within this watershed there are 15 major nursery lakes for juvenile sockeye: Takla, Trembleur, Stuart, Francois, Fraser, Quesnel, Chilko, Adams, Shuswap, Seton, Anderson, Lillooet, Pitt, Harrison, and Cultus.

From 1975 to 1985, staff of the International Pacific Salmon Fisheries Commission (IPSFC) periodically collected hydroacoustic density estimates and mid-water trawl samples from these lakes. Chilko Lake was not surveyed because population estimates based on hydroacoustic assessment techniques were considered unreliable due to the distributional characteristics of fry in the lake (Goodlad et al 1974).

Lakes experiencing cyclic densities were surveyed on a regular basis during the dominant (progeny of the largest escapement of a four year cycle) and sub-dominant (progeny of the second largest escapement of a four year cycle) brood years. Trawl sample results were used to provide fish species composition and size information. The species composition information was used to apportion the hydroacoustic population estimates. The IPSFC used these population estimates to predict the potential adult returns for management of the commercial sockeye salmon fishery.

METHODS

Each study lake was divided into trawl sample areas which contained 2 or 3 randomly selected hydroacoustic transects perpendicular to shore (ie. Fig. 2). These areas and transects remained the same for each survey. The methods used to estimate fish densities using acoustic and trawl results are described in Nunnalee (1973) and in Burzcynski and Johnson (1986). Trawl samples were captured using a 3m by 7m midwater trawl capable of fishing to 64m at the middle of the mouth opening. The trawl net was similar to the one described in Enzenhofer and Hume (1989), but without the closing capability. The depth and duration of the trawl were determined by visually estimating density from the acoustic echogram. Normally only one tow per area was done but if the echogram showed that the fish were stratified into layers then a trawl was done through each layer.

Each catch was anaesthetized in a 1% solution of 2-phenoxyethanol to prevent them from regurgitating their stomach contents and then preserved in 10% formalin. Each trawl catch was labelled and a trawl log was kept recording survey, tow, area, date, time, duration of trawl, depth, and weather. The total catch from each trawl was preserved.

The catch was left for at least one month to stabilize fish size before measuring (Rogers 1964). Fish were weighed to 0.01g using a Mettler PN 1210 electronic balance and measured to the nearest mm. Scales and the anterior portion of the stomach were removed from a maximum of 20 sockeye fry for aging. Each fish was numbered consecutively to reference the stomach and scale information to fish size and to aid in error checking.

Raw data were entered into a Lotus 123 spreadsheet for statistical analysis. Each survey was entered as a separate file and was organized for analysis by tow, area and species. Sockeye were divided into age 0, age 1 and age 2+. These categories were determined from the scale aging analysis, length frequency distributions, and somewhat arbitrarily by time of year based on fry emergence. Age 0 are fry from the current year's emergence and have not been in the lake over the winter. Age 1 are from the previous year's emergence and have been in the lake over 1 winter. Age 2+ are determined to have been in the lake for 2 winters and may also includes older kokanee (landlocked *O. nerka*). Kokanee occur in most sockeye rearing lakes, and in Shuswap Lake in low population years a large percentage of *O. nerka* are thought to be kokanee, but further study is required to determine this percentage.

After numbers were entered, length frequencies were plotted by survey number and species. All sockeye were plotted and where abundance exceeded 20/survey, stickleback (*Gasterosteus aculeatus*) and smelt (*Spirinchus thaleichthys*) were also plotted. Summary statistics (n, maximum, minimum, mean, standard deviation and variance) were calculated for length and weight by survey number and species and then by tow number and species.

RESULTS

In the eleven years 167 surveys were conducted and 688 tows executed. A total of 37,945 sockeye, 11,583 smelt, 7,505 stickleback, 539 sculpin (*Cottus asper*), 292 whitefish (*Coregonus clupeaformis*), 27 cyprinids and 33 others were sampled. Cyprinids sampled include redside shiner (*Richardsonius balteatus*), northern squawfish (*Ptychocheilus oregonensis*), and peamouth chub (*Mylocheilus caurinus*). Data are organized by lake and the results are presented in tables and figures. For each lake there is a map showing areas and transects, a tow log summarizing the catch and condition of capture; a table summarizing the data by survey; a table summarizing the data by individual trawl; and a length frequency graph for each survey.

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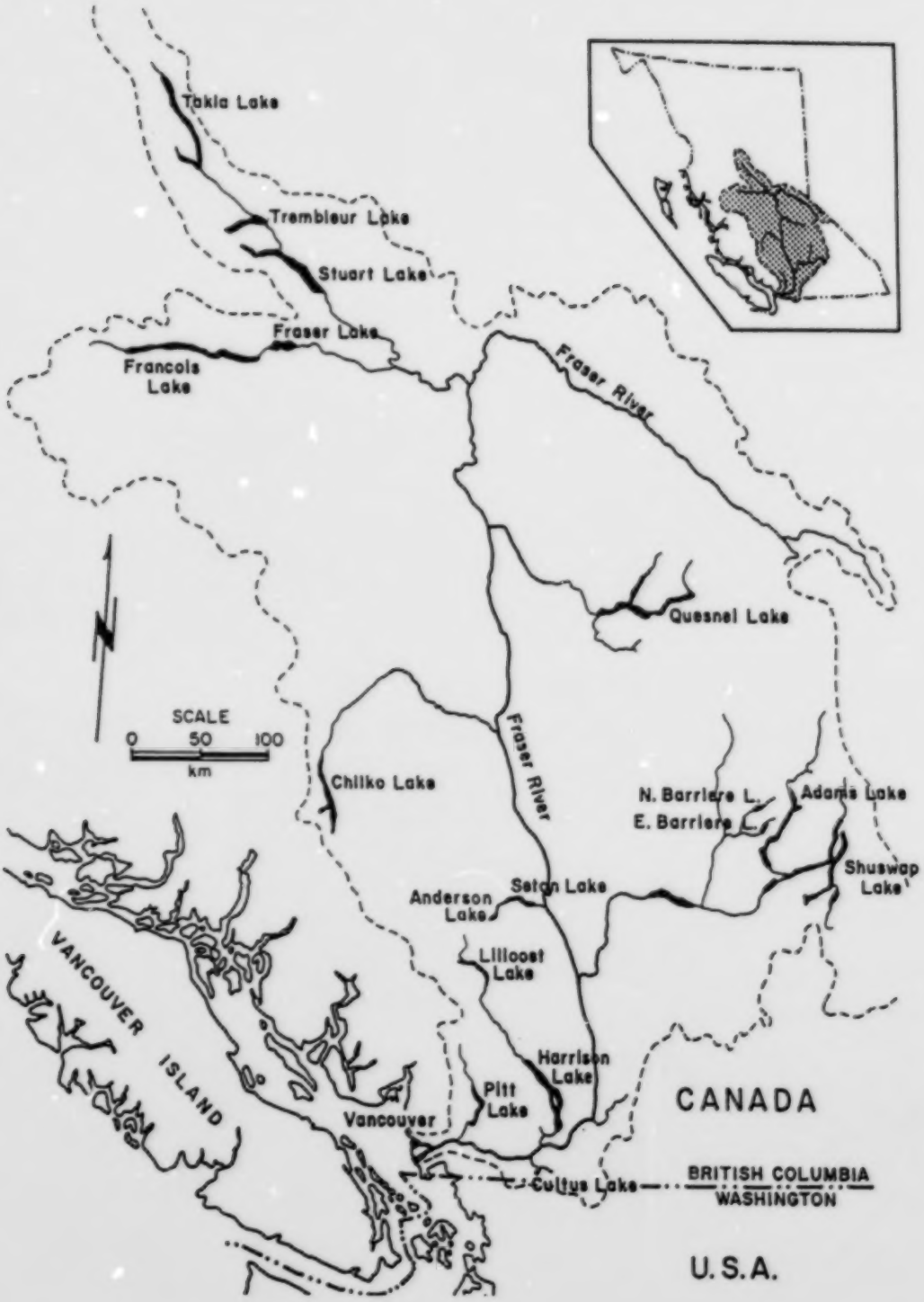


Fig. 1. Map of Fraser River watershed showing sockeye rearing lakes.

TABLE 1. Code number explanation for tow summary.

SKY:	LIGHT:	WIND:
0 - NO OBSERVATION	0 - NO OBSERVATION	0 - NO WIND
1 - 10% CLOUD COVER	1 - DAYLIGHT	1 - NE
2 - 50% CLOUD COVER	2 - TWILIGHT	2 - EAST
3 - > 50% CLOUD COVER	3 - DARK	3 - SE
4 - FOG OR HAZE	4 - MODERATE MOONLIGHT	4 - SOUTH
5 - INTERMITTENT RAIN	5 - BRIGHT MOONLIGHT	5 - SW
6 - CONTINUOUS RAIN		6 - WEST
7 - SNOW, RAIN OR BOTH		7 - NW
8 - HAIL		8 - NORTH
9 - THUNDERSTORM		9 - NO OBSERV

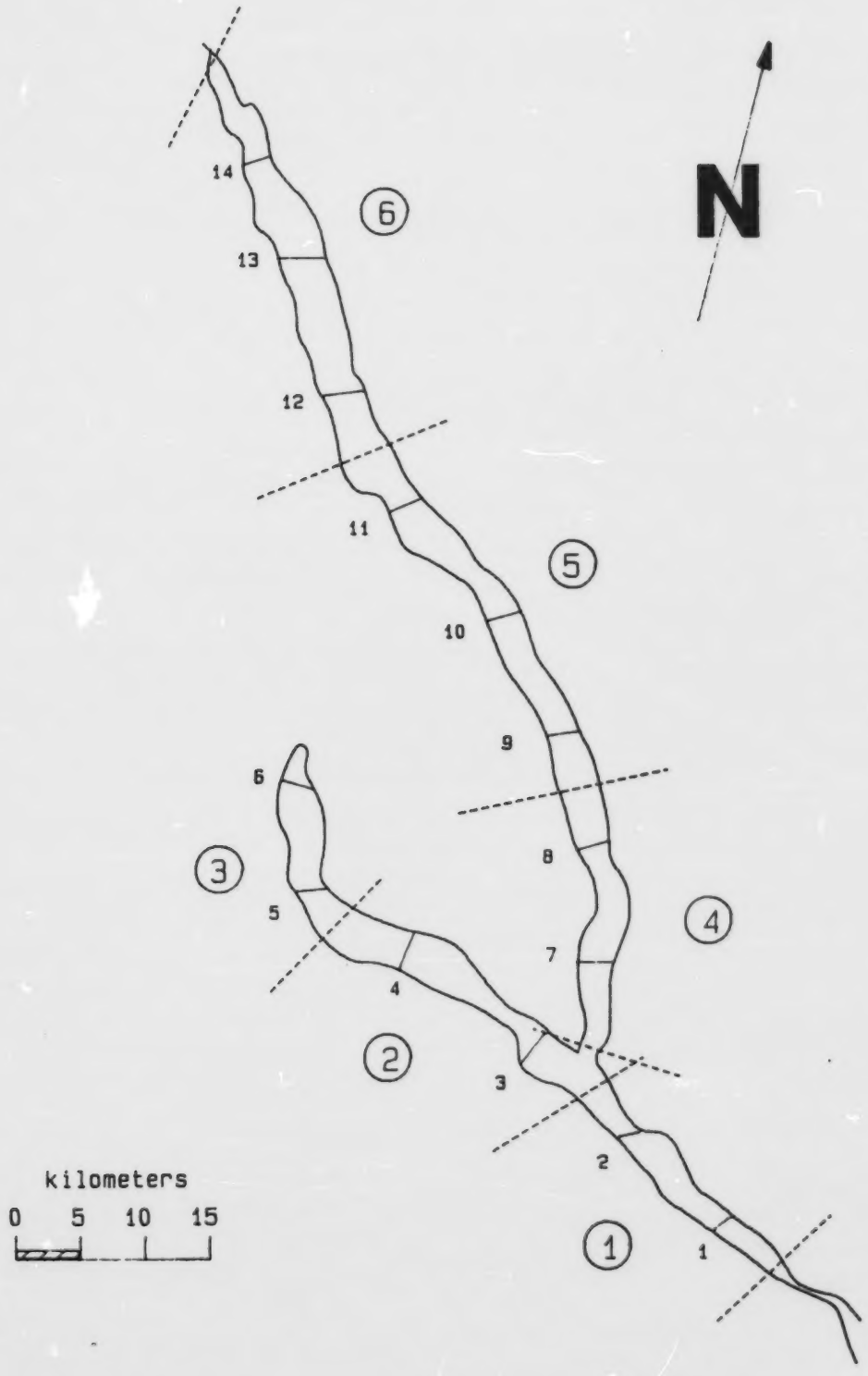


Fig. 2. Map of Takla Lake showing areas and transects.

Table 2a - Tow summary for Takla Lake

SURVEY #	SAMPLE DATE	TOW	AREA	SAMPLE TIME	DURATION (min)	DEPTH (m)	SKY CODE	LIGHT CODE	WIND DIR	SURFACE TEMP (C)	CATCH
7516	SEP 22/75	750045	3			18					6 AGE 0
7611	AUG 28/76	760029	1		45	13					29 AGE 0
	AUG 28/76	760030	5		60	13					1 AGE 1
	AUG 28/76	760031	1		30	25					26 AGE 0
											1 AGE 0
											1 WHITEFISH
7712	AUG 22/77	770029	2	22:15	30	12					276 AGE 0
	AUG 23/77	770030	5		75	13					96 AGE 0
7819	SEP 25/78	780086	3	21:23	10	13	1	3	0	10.0	41 AGE 0
	SEP 25/78	780087	3	21:50	15	24	1	3	0	10.0	11 AGE 0
											1 AGE 2+
	SEP 25/78	780088	2	23:19	10	14	1	3	0	9.5	37 AGE 0
	SEP 26/78	780089	1	01:45	15	18	1	3	0	9.5	17 AGE 0
											1 SCULPIN
	SEP 27/78	780093	4	21:25	20	14	3	3	0	10.0	2 SMELT
	SEP 27/78	780094	5	23:35	10	19	3	3	3	10.0	46 AGE 0
	SEP 28/78	780095	6	02:35	10	20	5	3	2	10.0	NONE
8107	AUG 17/81	810016	3	22:10	10	13	1	4	0	18.5	11 AGE 0
	AUG 18/81	810017	2	00:35	10	13	1	4	0	18.0	4 AGE 0
	AUG 18/81	810018	1	02:22	10	13	1	4	0	18.0	4 AGE 0
											3 AGE 0
											1 AGE 2+
	AUG 18/81	810019	6	22:54	15	19	1	4	0	18.0	1 OTHER
											2 AGE 0
	AUG 19/81	810020	5	02:13	10	13	1	4	0	18.5	1 WHITEFISH
	AUG 19/81	810021	4	22:33	15	07	1	4	0	18.0	19 AGE 0
											42 AGE 0
											1 AGE 1
8208	AUG 15/82	820029	6	21:44	15	13	3	4	0	17.0	164 AGE 0
	AUG 16/82	820030	5	00:30	15	13	3	4	0	16.5	5 AGE 1
	AUG 16/82	820031	4	02:21	20	13	3	4	0	16.5	24 AGE 0
	AUG 16/82	820032	2	21:52	20	13	3	3	6	14.5	8 AGE 0
	AUG 16/82	820033	1	23:10	20	19	3	3	6	14.5	47 AGE 0
											4 AGE 0

Table 2b - Trawl statistics by survey for Takla Lake

SURVEY#	DATES	CATCH		LENGTH (mm)					WEIGHT (g)				
		SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
7516	SEP 22/75	AGE 0	6	64.00	82	42	14.69	215.67	3.88	7.00	1.20	2.19	4.80
7611	AUG 28/76	AGE 0	56	49.88	72	36	11.02	121.47	1.62	4.17	0.44	1.11	1.23
		AGE 1	1	83.00	83	83	0.00	0.00	7.24	7.24	7.24	0.00	0.00
		WHITEFISH	1	46.00	46	46	0.00	0.00	0.93	0.93	0.93	0.00	0.00
7712	AUG 22-23/77	AGE 0	372	44.26	74	27	6.51	42.44	0.99	4.61	0.19	0.60	0.36
7819	SEP 25-28/78	AGE 0	163	65.38	89	38	9.98	99.57	3.40	7.61	0.59	1.53	2.34
		AGE 2+	1	140.00	140	140	0.00	0.00	36.59	36.59	36.59	0.00	0.00
		SCULPIN	1	28.00	28	28	0.00	0.00	0.21	0.21	0.21	0.00	0.00
		SMELT	2	50.50	52	49	1.50	2.25	1.35	1.46	1.23	0.12	0.01
8107	AUG 17-19/81	AGE 0	74	39.72	62	33	4.24	18.01	0.68	2.40	0.07	0.29	0.08
		AGE 1	1	133.00	133	133	0.00	0.00	31.18	31.18	31.18	0.00	0.00
		AGE 2+	1	180.00	180	180	0.00	0.00	78.50	78.50	78.50	0.00	0.00
		OTHER	1	75.00	75	75	0.00	0.00	4.03	4.03	4.03	0.00	0.00
		WHITEFISH	1	260.00	260	260	0.00	0.00					
8208	AUG 15-16/82	AGE 0	247	48.45	70	24	11.05	122.13	1.53	4.18	0.13	1.00	0.99
		AGE 1	5	125.80	133	121	4.79	22.96	25.23	26.79	22.90	1.46	2.14

Table 2c - Trawl statistics by tow for Takla Lake

TRAWL					CATCH		LENGTH (mm)					WEIGHT (g)				
AREA	DATE	TOW	DEPTH (m)	DURATION (min)	SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
SURVEY # 7516																
3	SEP 22/75	750045	18		AGE 0	6	64.00	82	42	14.69	215.67	3.88	7.00	1.20	2.19	4.80
SURVEY # 7611																
1	AUG 28/76	760029	13	45	AGE 0	29	56.72	72	38	10.69	114.20	2.28	4.17	0.61	1.17	1.36
					AGE 1	1	83.00	83	83	0.00	0.00	7.24	7.24	7.24	0.00	0.00
5	AUG 28/76	760030	13	60	AGE 0	26	41.88	52	36	3.86	14.87	0.87	1.47	0.44	0.24	0.06
1	AUG 28/76	760031	25	30	AGE 0	1	59.00	59	59	0.00	0.00	2.24	2.24	2.24	0.00	0.00
					WHITEFISH	1	46.00	46	46	0.00	0.00	0.93	0.93	0.93	0.00	0.00
SURVEY # 7712																
2	AUG 22/77	770029	12	30	AGE 0	276	43.88	74	27	7.17	51.43	1.01	4.61	0.19	0.68	0.46
5	AUG 23/77	770030	13	75	AGE 0	96	45.35	52	36	3.87	14.96	0.95	1.62	0.44	0.25	0.06
SURVEY # 7819																
3	SEP 25/78	780086	13	10	AGE 0	41	64.37	81	40	9.37	87.84	3.23	6.41	0.59	1.35	1.83
3	SEP 25/78	780087	24	15	AGE 0	11	74.91	89	64	8.87	78.63	4.94	7.61	2.92	1.72	2.97
					AGE 2+	1	140.00	140	140	0.00	0.00	36.59	36.59	36.59	0.00	0.00
2	SEP 25/78	780088	14	10	AGE 0	37	62.27	82	44	8.89	79.12	2.88	6.13	1.05	1.24	1.54
1	SEP 26/78	780089	18	15	AGE 0	17	66.71	82	40	10.31	106.21	3.47	6.04	0.63	1.46	2.13
					SCULPIN	1	28.00	28	28	0.00	0.00	0.21	0.21	0.21	0.00	0.00
					SMELT	2	50.50	52	49	1.50	2.25	1.35	1.46	1.23	0.12	0.01
4	SEP 27/78	780093	14	20	AGE 0	46	66.17	80	47	9.08	82.40	3.58	6.78	1.04	1.51	2.28
5	SEP 27/78	780094	19	10	NO FISH											
6	SEP 28/78	780095	20	10	AGE 0	11	64.73	85	38	12.71	161.65	3.42	7.13	0.59	1.84	3.40

Table 2c - Trawl statistics by tow for Takla Lake

TRAWL					CATCH		LENGTH (mm)					WEIGHT (g)				
AREA	DATE	TOW	DEPTH (m)	DURATION (min)	SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
SURVEY # 8107																
3	AUG 17/81	810016	13	10	AGE 0	4	36.75	39	33	2.49	6.19	0.58	0.73	0.37	0.15	0.02
2	AUG 18/81	810017	13	10	AGE 0	4	37.00	43	34	3.67	13.50	0.41	0.60	0.29	0.13	0.02
1	AUG 18/81	810018	13	10	AGE 0	3	49.33	62	35	11.09	122.89	1.47	2.40	0.56	0.75	0.56
					AGE 2+	1	180.00	180	180	0.00	0.00	78.50	78.50	78.50	0.00	0.00
					OTHER	1	75.00	75	75	0.00	0.00	4.03	4.03	4.03	0.00	0.00
6	AUG 18/81	810019	19	15	AGE 0	2	40.00	43	37	3.00	9.00	0.72	0.94	0.50	0.22	0.05
					WHITEFISH	1	260.00	260	260	0.00	0.00					
5	AUG 19/81	810020	13	10	AGE 0	19	38.58	43	34	2.64	6.98	0.62	0.97	0.35	0.16	0.02
4	AUG 19/81	810021	07	15	AGE 0	42	40.07	48	35	2.94	8.64	0.69	1.07	0.07	0.18	0.03
					AGE 1	1	133.00	133	133	0.00	0.00	31.18	31.18	31.18	0.00	0.00
SURVEY # 8208																
6	AUG 15/82	820029	13	15	AGE 0	164	51.49	67	24	10.38	107.84	1.81	4.18	0.13	0.95	0.90
					AGE 1	5	125.80	133	121	4.79	22.96	25.23	26.79	22.90	1.46	2.14
5	AUG 16/82	820030	13	15	AGE 0	24	41.13	60	29	9.33	87.11	0.81	2.60	0.22	0.68	0.46
4	AUG 16/82	820031	13	20	AGE 0	8	45.00	63	35	8.75	76.50	1.02	2.48	0.35	0.70	0.49
2	AUG 16/82	820032	13	20	AGE 0	47	42.49	69	28	9.52	90.72	0.97	3.63	0.27	0.78	0.61
1	AUG 16/82	820033	19	20	AGE 0	4	44.50	70	33	14.84	220.25	2.08	4.00	0.52	1.58	2.49

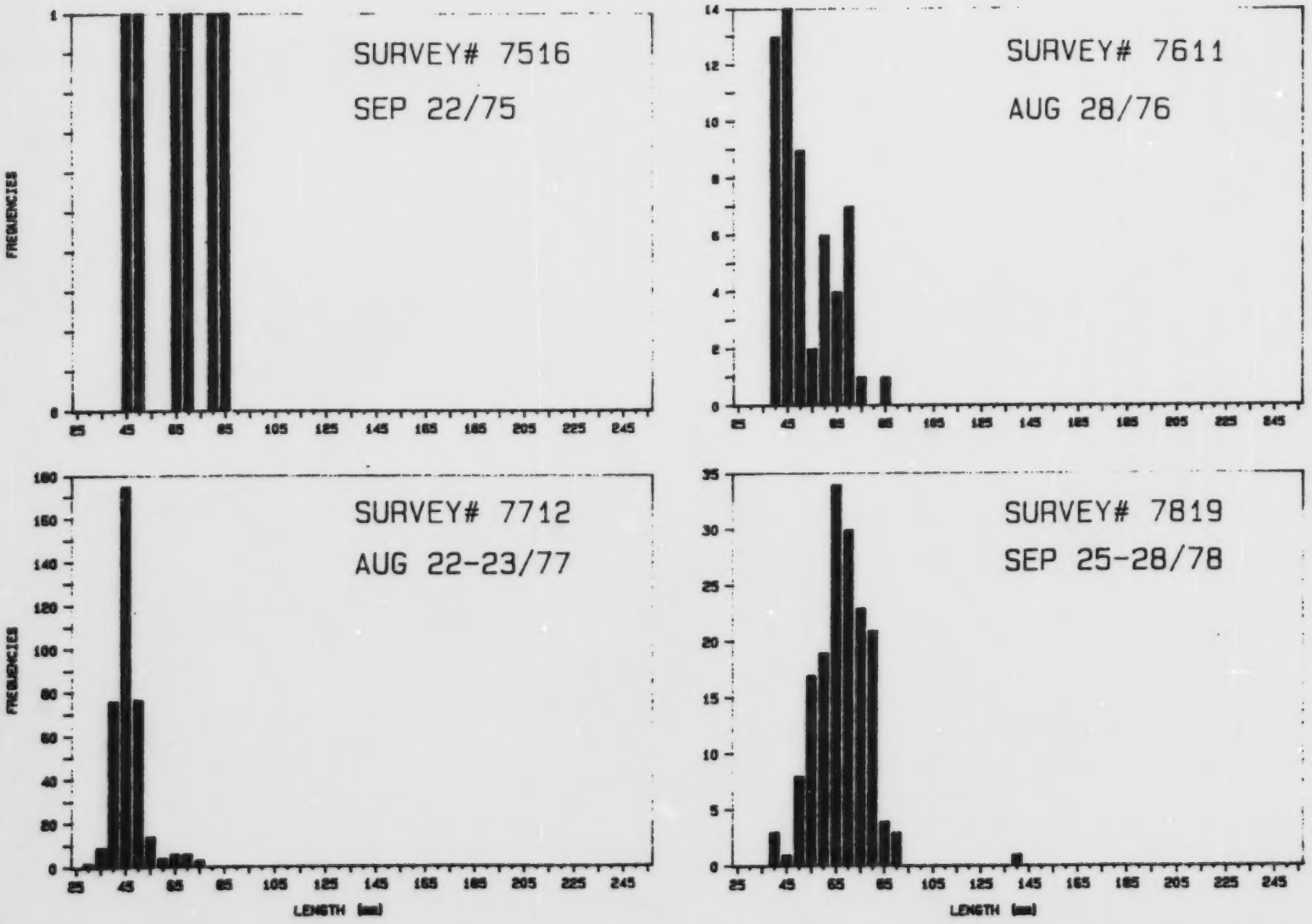
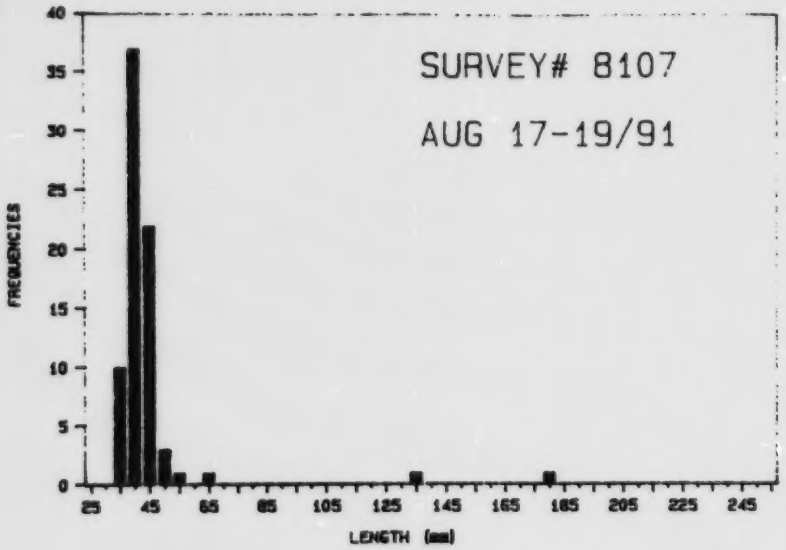


Fig. 3. Sockeye (O. nerka) length frequencies in Takla Lake.



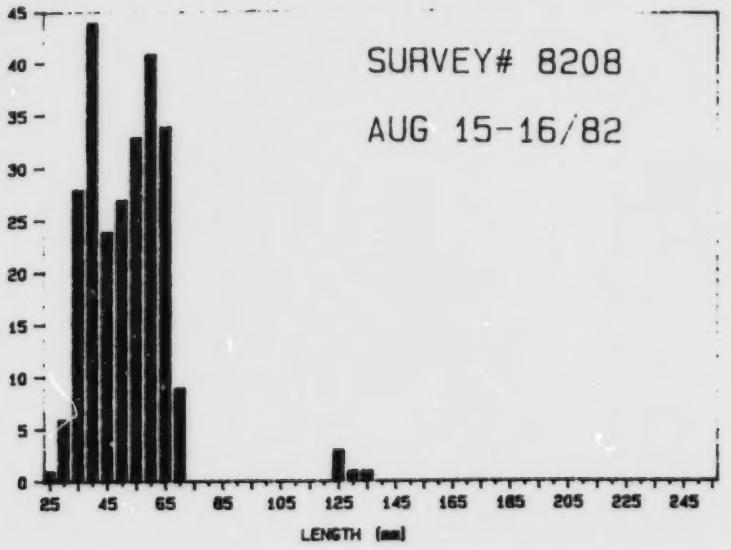


Fig. 3. Continued

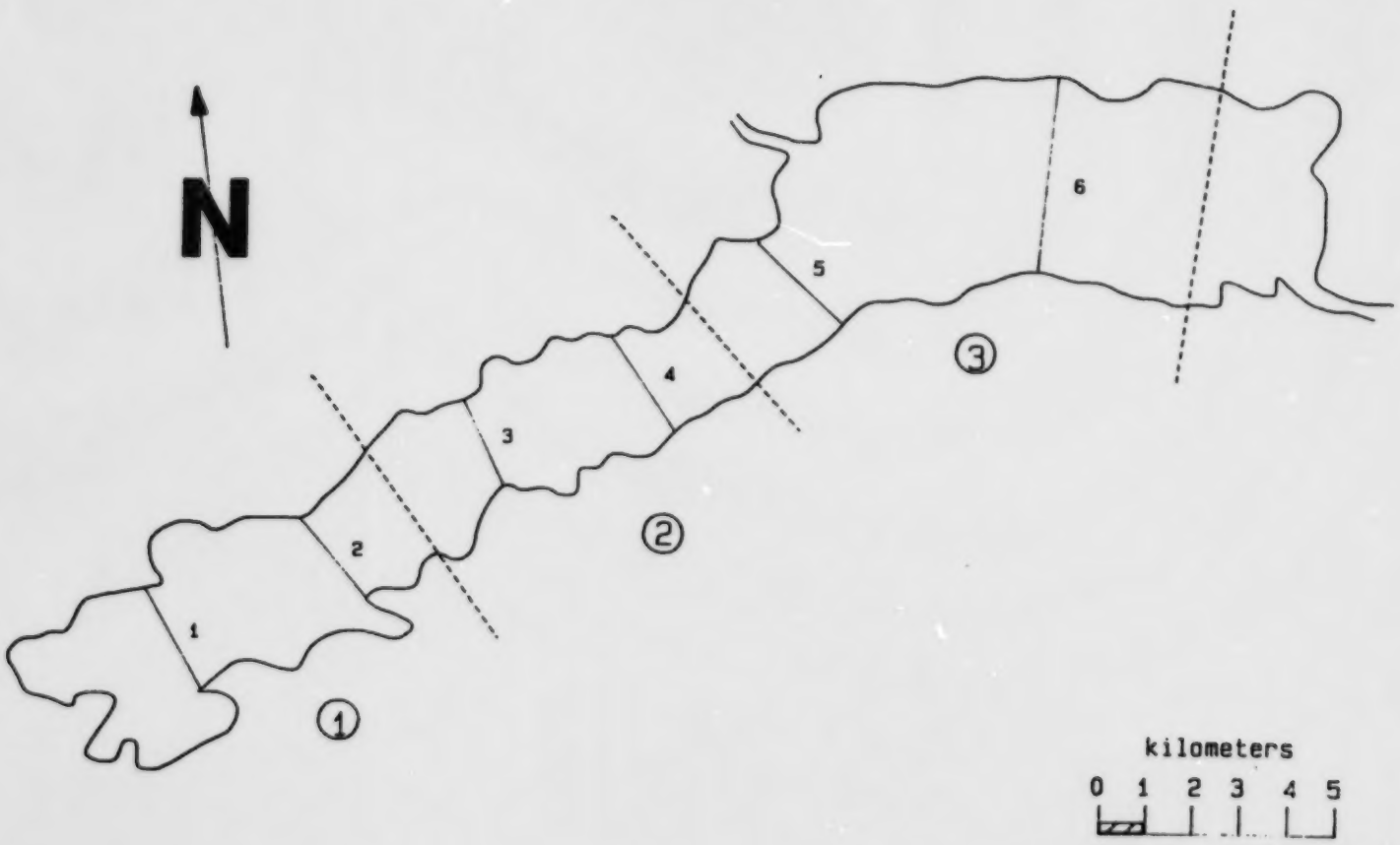


Fig. 4. Map of Trembleur Lake showing areas and transects.

Table 3a - Tow summary for Trembleur Lake

SURVEY #	SAMPLE DATE	TOW	AREA	SAMPLE TIME	DURATION (min)	DEPTH (m)	SKY CODE	LIGHT CODE	WIND DIR	SURFACE TEMP (C)	CATCH
7517	SEP 24/75	750046	3		4	16					16 AGE 0
	SEP 24/75	750047	1		2	20					15 AGE 0
	SEP 24/75	750048			3	20					33 AGE 0
7612	AUG 29/76	760032	1		40	12					16 AGE 0
	AUG 30/76	760033	3			43					1 AGE 0
	AUG 30/76	760034	3		30	15					49 AGE 0
											1 AGE 1
											1 WHITEFISH
7713	AUG 26/77	770031	1		18	16					79 AGE 0
	AUG 26/77	770032	3		10	22					26 AGE 0
											2 AGE 1
											19 WHITEFISH
7820	SEP 26/78	780090	1	20:43	5	34	1	3	0	11.0	00 AGE 0
											2 AGE 1
											2 WHITEFISH
	SEP 26/78	780091	2	22:57	3	20	3	3	1	11.5	36 AGE 0
	SEP 27/78	780092	3	02:55	10	16	3	3	0	11.5	6 AGE 0
											1 SCULPIN
											4 WHITEFISH
8108	AUG 20/81	810022	1	21:18	5	13	1	3	5	17.5	19 AGE 0
											2 AGE 1
	AUG 20/81	810023	2	23:12	5	13	1	4	5	17.0	16 AGE 0
8209	AUG 18/82	820034	1	20:41	20	19	1	4	0	14.0	1 AGE 0
	AUG 18/82	820035	2	22:20	5	13	1	4	0	13.0	11 AGE 0
											1 WHITEFISH
	AUG 18/82	820036	3	23:50	10	13	1	4	6	14.0	6 AGE 0

Table 3b - Trawl statistics by survey for Trembleur Lake

SURVEY#	DATES	CATCH		LENGTH (mm)					WEIGHT (g)				
		SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
7517	SEP 24/75	AGE 0	64	70.27	88	40	9.13	83.35	4.46	8.20	0.80	1.56	2.43
7612	AUG 29-30/76	AGE 0	166	63.61	81	28	7.92	62.77	3.02	6.27	0.19	1.08	1.17
		AGE 1	1	169.00	169	169	0.00	0.00	48.08	48.08	48.08	0.00	0.00
		WHITEFISH	1	169.00	169	169	0.00	0.00	48.08	48.08	48.08	0.00	0.00
7713	AUG 26/77	AGE 0	372	44.26	74	27	6.51	42.44	0.99	4.61	0.19	0.60	0.36
7820	SEP 26-27/78	AGE 0	142	75.60	90	53	6.30	39.71	5.08	8.50	1.65	1.25	1.57
		AGE 1	2	170.00	170	170	0.00	0.00	52.74	53.76	51.72	1.02	1.04
		SCULPIN	1	39.00	39	39	0.00	0.00	0.66	0.66	0.66	0.00	0.00
		WHITEFISH	6	52.17	76	42	11.58	134.14	1.52	3.40	0.73	0.91	0.82
8108	AUG 20/81	AGE 0	35	53.34	71	38	9.63	92.80	1.90	4.00	0.63	1.06	1.13
		AGE 1	2	148.00	152	144	4.00	16.00	39.33	40.88	37.78	1.55	2.40
8209	AUG 18/82	AGE 0	318	50.42	73	19	7.37	54.28	1.47	4.30	0.50	0.68	0.46
		WHITEFISH	1	61.00	61	61	0.00	0.00	1.89	1.89	1.89	0.00	0.00

Table 3c - Trawl statistics by tow for Tremblcur Lake

AREA	DATE	TOW	DEPTH (m)	DURATION (min)	SPECIES	N	LENGTH (mm) MEAN	MAX	MIN	S.D.	VAR	WEIGHT (g) MEAN	MAX	MIN	S.D.	VAR
SURVEY # 7517																
3	SEP 24/75	750046	16	4	AGE 0	16	70.25	84	47	9.72	94.44	4.58	7.70	1.10	1.74	3.03
1	SEP 24/75	750047	20	2	AGE 0	15	71.47	88	40	10.07	101.45	4.51	8.20	0.80	1.54	2.38
	SEP 24/75	750048	20	3	AGE 0	33	69.73	83	54	8.29	68.80	4.38	7.01	2.00	1.47	2.15
SURVEY # 7612																
1	AUG 29/76	760032	12	40	AGE 0	116	63.01	80	45	6.99	48.85	2.87	5.83	1.00	0.96	0.92
3	AUG 30/76	760033	43		AGE 0	1	63.00	63	63	0.00	0.00	2.57	2.57	2.57	0.00	0.00
3	AUG 30/76	760034	15	30	AGE 0	49	65.04	81	28	9.70	94.08	3.38	6.27	0.19	1.26	1.60
					AGE 1	1	169.00	169	169	0.00	0.00	48.08	48.08	48.08	0.00	0.00
					WHITEFISH	1	169.00	169	169	0.00	0.00	48.08	48.08	48.08	0.00	0.00
SURVEY # 7713																
1	AUG 26/77	770031	16	18	AGE 0	179	63.70	81	39	6.94	48.14	3.06	5.96	1.23	0.99	0.98
3	AUG 26/77	770032	22	10	AGE 0	26	71.58	79	64	3.70	13.71	3.80	5.10	3.04	0.59	0.35
					AGE 1	2	153.50	155	152	1.50	2.25	42.51	42.96	42.06	0.45	0.20
					WHITEFISH	19	62.32	75	24	14.60	213.16	2.77	4.44	0.12	1.24	1.55
SURVEY # 7820																
1	SEP 26/78	780090	34	5	AGE 0	100	76.94	90	59	5.56	30.96	5.34	8.50	2.24	1.17	1.38
					AGE 1	2	170.00	170	170	0.00	0.00	52.74	53.76	51.72	1.02	1.04
					WHITEFISH	2	65.00	76	54	11.00	121.00	2.55	3.40	1.70	0.85	0.72
2	SEP 26/78	780091	20	3	AGE 0	36	71.25	83	53	6.40	40.91	4.22	6.61	1.65	1.07	1.14
3	SEP 27/78	780092	16	10	AGE 0	6	79.33	88	75	4.57	20.89	5.92	8.17	4.73	1.12	1.24
					SCULPIN	1	39.00	39	39	0.00	0.00	0.66	0.66	0.66	0.00	0.00
					WHITEFISH	4	45.75	52	42	4.15	17.19	1.01	1.43	0.73	0.28	0.08

Table 3c - Trawl statistics by tow for Trembleur Lake

AREA	DATE	TRAWL TOW	DEPTH (m)	DURATION (min)	CATCH SPECIES	N	LENGTH (mm) MEAN	MAX	MIN	S.D.	VAR	WEIGHT (g) MEAN	MAX	MIN	S.D.	VAR
SURVEY # 8108																
1	AUG 20/81	810022	13	5	AGE 0	19	57.37	71	39	9.52	90.55	2.36	4.00	0.71	1.08	1.16
					AGE 1	2	148.00	152	144	4.00	16.00	39.33	40.88	37.78	1.55	2.40
2	AUG 20/81	810023	13	5	AGE 0	16	48.56	67	38	7.31	53.37	1.35	3.48	0.63	0.73	0.54
SURVEY # 8209																
1	AUG 18/82	820034	19	20	AGE 0	1	47.00	47	47	0.00	0.00	1.06	1.06	1.06	0.00	0.00
2	AUG 18/82	820035	13	5	AGE 0	311	50.35	73	19	7.39	54.56	1.46	4.30	0.50	0.68	0.46
					WHITEFISH	1	61.00	61	61	0.00	0.00	1.89	1.89	1.89	0.00	0.00
3	AUG 18/82	820036	13	10	AGE 0	6	54.67	63	49	5.34	28.56	1.85	2.77	1.33	0.53	0.28

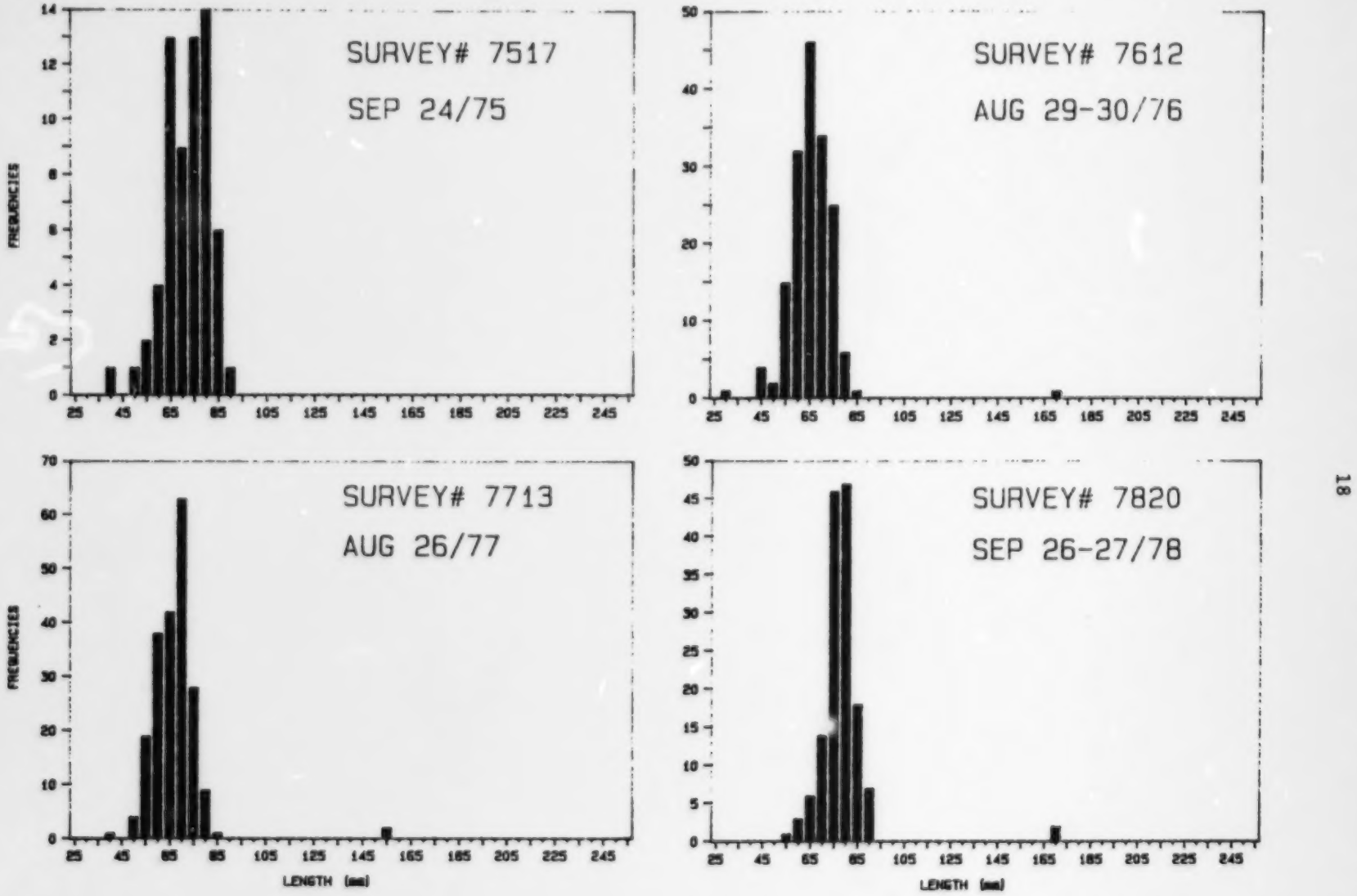
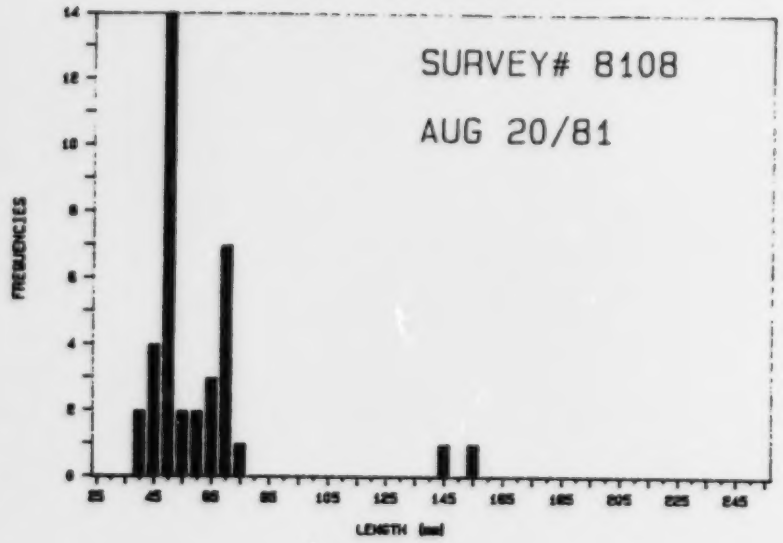


Fig. 5. Sockeye (O. nerka) length frequencies in Trembleur Lake.



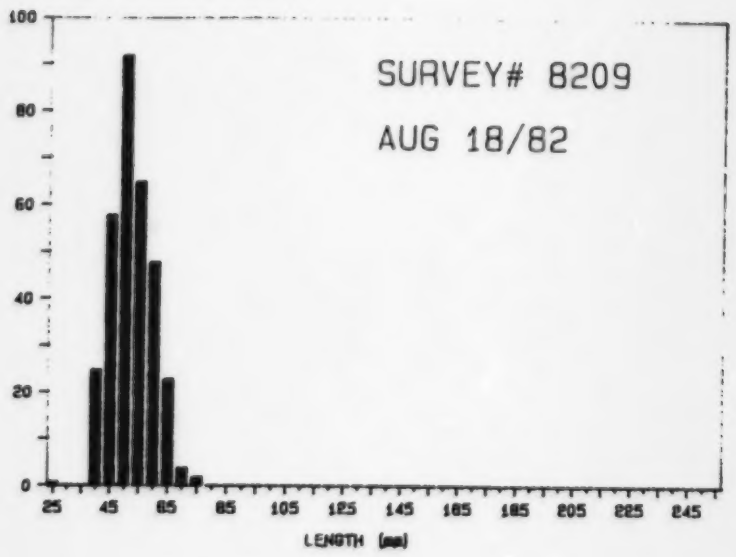


Fig. 5. Continued.

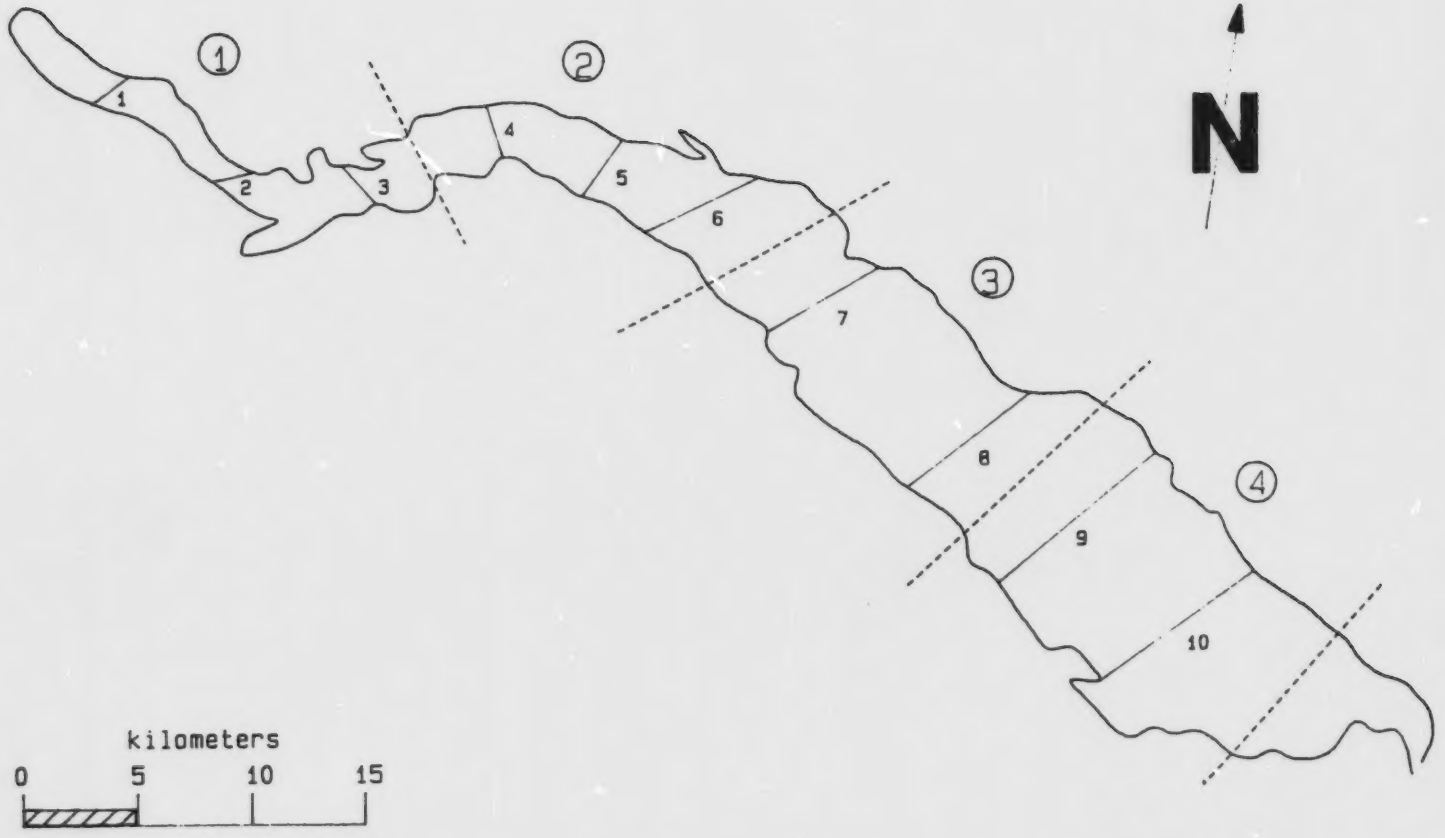


Fig. 6. Map of Stuart Lake showing areas and transects.

Table 4a - Tow summary for Stuart Lake

SURVEY #	SAMPLE DATE	TOW	AREA	SAMPLE TIME	DURATION (min)	DEPTH (m)	SKY CODE	LIGHT CODE	WIND DIR	SURFACE TEMP (C)	CATCH
7515	SEP 21/75	750043	1								
	SEP 21/75	750044	2								64 AGE 0
											1 AGE 0
7613	SEP 2/76	760035	1		45	14					
	SEP 4/76	760036	1		30	20					90 AGE 0
	SEP 4/76	760037	1		30	23					13 AGE 0
											2 AGE 0
											1 OTHER
7714	AUG 30/77	770033	1		20	14					
											43 AGE 0
	AUG 31/77	770034	4		30	22					1 WHITEFISH
											13 AGE 0
	AUG 31/77	770035	4		30	23					1 SCULPIN
											8 AGE 0

Table 4b - Trawl statistics by survey for Stuart Lake

SURVEY#	DATES	CATCH		LENGTH (mm)					WEIGHT (g)				
		SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
7515	SEP 21/75	AGE 0	65	58.58	76	50	4.56	20.77	2.52	5.44	1.51	0.66	0.43
7613	SEP 2-4/76	AGE 0	105	52.59	79	34	8.71	75.90	1.80	6.14	0.31	1.07	1.14
		OTHER	1	186.00	186	186	0.00	0.00	60.11	60.11	60.11	0.00	0.00
7714	AUG 30-31/77	AGE 0	83	59.02	72	40	6.84	46.72	2.47	4.54	0.79	0.81	0.65
		AGE 2+	6	179.33	202	151	21.10	445.22	74.56	103.05	41.59	27.30	745.21
		OTHER	2	91.50	134	49	42.50	1806.25	11.30	21.34	1.25	10.05	100.90
		SCULPIN	1	41.00	41	41	0.00	0.00	0.70	0.70	0.70	0.00	0.00
		WHITEFISH	2	50.00	76	24	26.00	676.00	2.21	4.23	0.19	2.02	4.08
7822	OCT 1-2/78	AGE 0	99	72.21	85	60	7.19	51.66	4.35	7.55	2.24	1.35	1.82
		SCULPIN	16	30.88	37	22	4.01	16.11	0.29	0.51	0.10	0.11	0.01
		WHITEFISH	2	108.00	136	80	28.00	784.00	17.95	30.34	5.57	12.39	153.39
8109	AUG 22-23/81	AGE 0	439	47.45	65	26	4.04	16.31	1.31	3.56	0.15	0.33	0.11
		AGE 1	2	152.50	155	150	2.50	6.25	48.93	52.32	45.54	3.39	11.49
8210	AUG 20-21/82	AGE 0	171	49.17	71	35	7.81	60.98	1.48	4.23	0.44	0.73	0.53
		AGE 1	2	152.50	167	138	14.50	210.25	35.36	36.88	33.84	1.52	2.31
		AGE 2+	1	180.00	180	180	0.00	0.00	85.22	85.22	85.22	0.00	0.00
		WHITEFISH	12	70.58	78	62	5.16	26.58	3.85	5.47	2.51	1.02	1.04

Table 4c - Trawl statistics by tow for Stuart Lake

TRAWL					CATCH		LENGTH (mm)					WEIGHT (g)				
AREA	DATE	TOW	DEPTH (m)	DURATION (min)	SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
SURVEY # 7515																
1	SEP 21/75	750043			AGE 0	64	58.48	76	50	4.52	20.44	2.51	5.44	1.51	0.66	0.43
2	SEP 21/75	750044			AGE 0	1	65.00	65	65	0.00	0.00	2.93	2.93	2.93	0.00	0.00
SURVEY # 7613																
1	SEP 2/76	760035	14	45	AGE 0	90	50.40	73	34	6.67	44.55	1.51	4.20	0.31	0.67	0.44
1	SEP 4/76	760036	20	30	AGE 0	13	67.00	79	55	7.69	59.08	3.79	6.14	2.06	1.25	1.56
1	SEP 4/76	760037	23	30	AGE 0	2	57.50	60	55	2.50	6.25	2.12	2.37	1.86	0.25	0.07
					OTHER	1	186.00	186	186	0.00	0.00	60.11	60.11	60.11	0.00	0.00
SURVEY # 7714																
1	AUG 30/77	770033	14	20	AGE 0	43	56.60	68	40	6.95	48.33	2.21	4.03	0.79	0.79	0.63
					WHITEFISH	1	24.00	24	24	0.00	0.00	0.19	0.19	0.19	0.00	0.00
4	AUG 31/77	770034	22	30	AGE 0	13	64.08	72	56	4.83	23.30	3.05	4.54	2.24	0.69	0.48
					SCULPIN	1	41.00	41	41	0.00	0.00	0.70	0.70	0.70	0.00	0.00
4	AUG 31/77	770035	23	30	AGE 0	8	60.75	66	52	4.71	22.19	2.60	3.31	1.49	0.63	0.40
2	AUG 31/77	770036	20	10	AGE 0	9	61.56	70	52	5.29	28.02	2.74	3.80	1.46	0.66	0.44
					AGE 2+	4	169.00	200	151	18.59	345.50	61.35	103.05	41.59	24.37	594.10
2	AUG 31/77	770037	22	10	AGE 0	10	59.20	70	49	6.34	40.16	2.51	4.03	1.52	0.75	0.56
					AGE 2+	2	200.00	202	198	2.00	4.00	100.99	101.06	100.91	0.08	0.00
					OTHER	2	91.50	134	49	42.50	1806.25	11.30	21.34	1.25	10.05	100.90
					WHITEFISH	1	76.00	76	76	0.00	0.00	4.23	4.23	4.23	0.00	0.00

Table 4c - Trawl statistics by tow for Stuart Lake

TRAWL					CATCH		LENGTH (mm)					WEIGHT (g)				
AREA	DATE	TOW	DEPTH (m)	DURATION (min)	SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
SURVEY # 7822																
1	OCT 1/78	780096	20	10	AGE 0	66	69.98	84	60	6.37	40.53	3.90	6.70	2.24	1.13	1.28
					SCULPIN	1	27.00	27	27	0.00	0.00	0.14	0.14	0.14	0.00	0.00
2	OCT 2/78	780097	16	20	AGE 0	19	74.58	82	60	7.02	49.30	4.87	6.66	2.41	1.32	1.75
					SCULPIN	11	31.27	37	22	3.96	15.65	0.31	0.51	0.11	0.11	0.01
					WHITEFISH	2	108.00	136	80	28.00	784.00	17.95	30.34	5.57	12.39	153.39
4	OCT 2/78	780098	18	15	AGE 0	14	79.50	85	70	4.82	23.25	5.77	7.55	3.76	1.06	1.12
					SCULPIN	4	30.75	35	24	4.15	17.19	0.25	0.37	0.10	0.10	0.00
SURVEY # 8109																
1	AUG 22/81	810024	13	2	AGE 0	410	47.33	65	26	4.03	16.20	1.31	3.56	0.15	0.34	0.11
2	AUG 23/81	810025	19	2	AGE 0	27	49.30	57	40	3.81	14.50	1.41	2.23	0.77	0.32	0.10
3	AUG 23/81	810026	19	5	AGE 0	2	46.50	50	43	3.50	12.25	1.16	1.38	0.95	0.22	0.05
					AGE 1	2	152.50	155	150	2.50	6.25	48.93	52.32	45.54	3.39	11.49
SURVEY # 8210																
1	AUG 20/82	820037	13	5	AGE 0	101	44.97	71	35	5.94	35.32	1.13	4.23	0.44	0.54	0.30
2	AUG 20/82	820038	19	10	AGE 0	31	52.77	68	38	7.44	55.34	1.70	3.55	0.59	0.73	0.53
3	AUG 21/82	820039	19	10	AGE 0	10	58.80	66	53	3.43	11.76	2.47	3.61	1.72	0.50	0.25
					AGE 1	2	152.50	167	138	14.50	210.25	35.36	36.88	33.84	1.52	2.31
					AGE 2+	1	180.00	180	180	0.00	0.00	85.22	85.22	85.22	0.00	0.00
					WHITEFISH	7	70.29	78	62	5.62	31.63	3.80	5.47	2.78	1.09	1.18
4	AUG 21/82	820040	19	5	AGE 0	29	56.62	64	48	3.25	10.58	2.15	3.33	1.35	0.39	0.15
					WHITEFISH	5	71.00	77	64	4.38	19.20	3.93	5.07	2.51	0.91	0.83

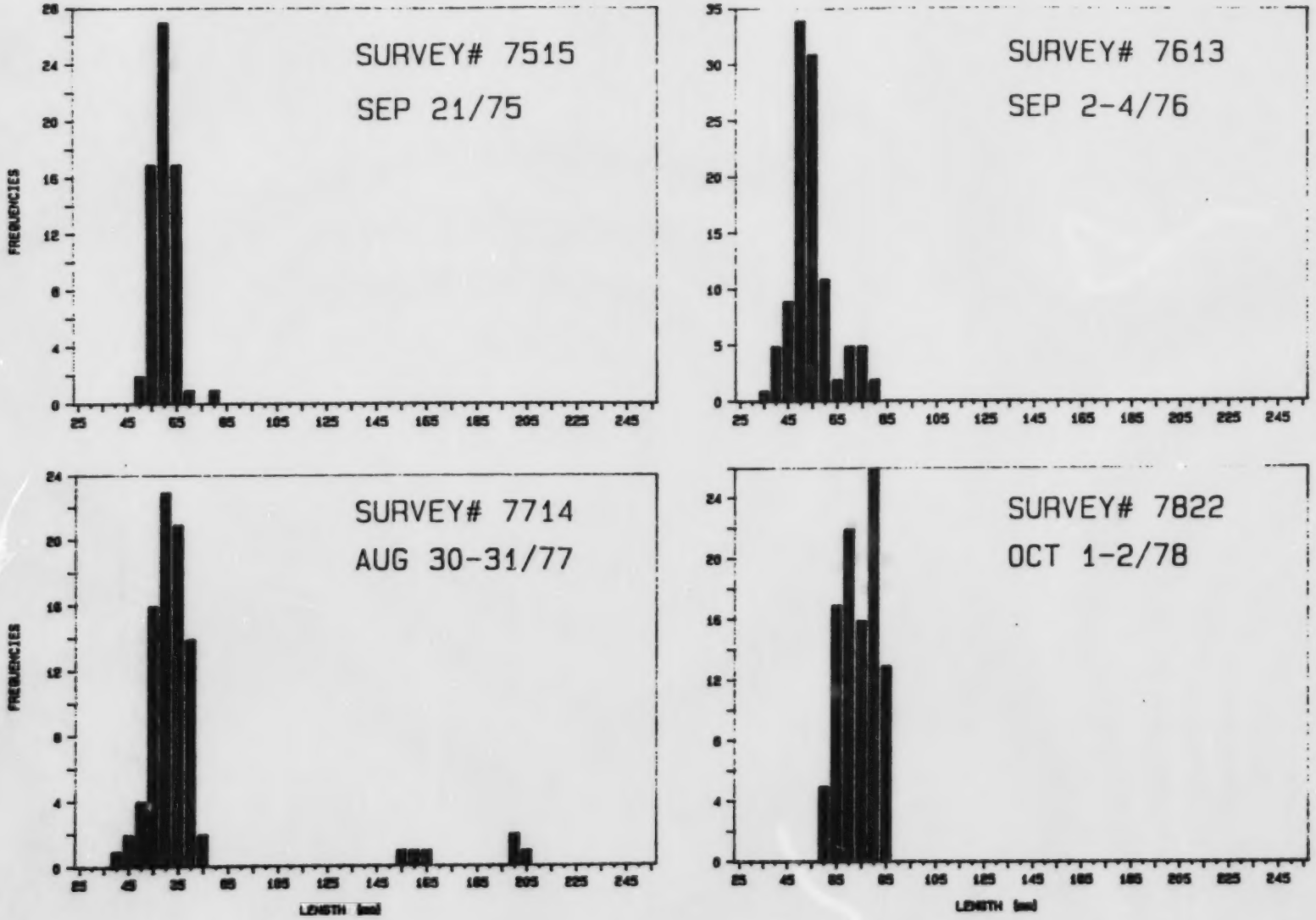
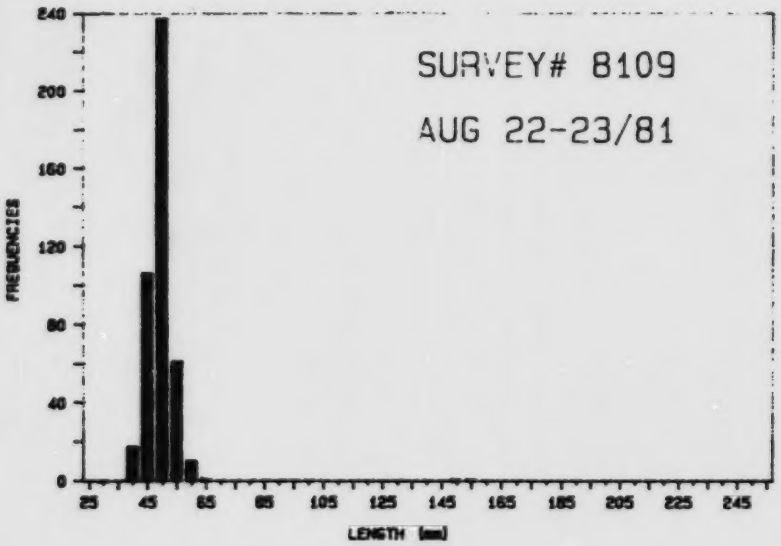


Fig. 7. Sockeye (O. nerka) length frequencies in Stuart Lake.



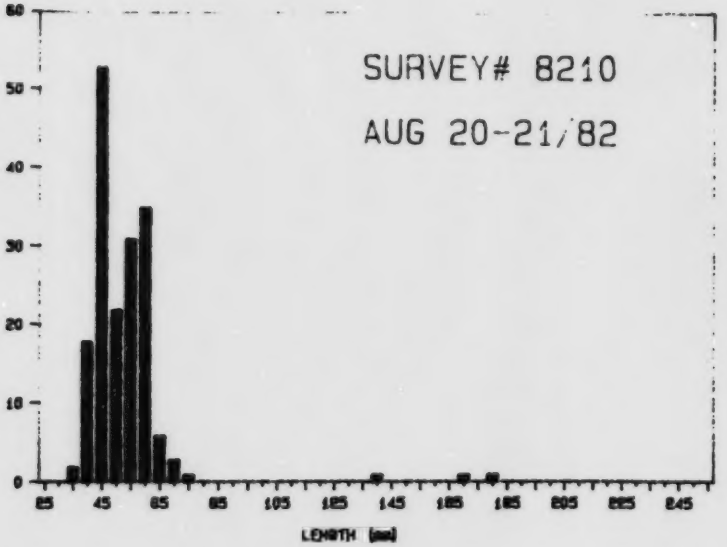


Fig. 7. Continued.

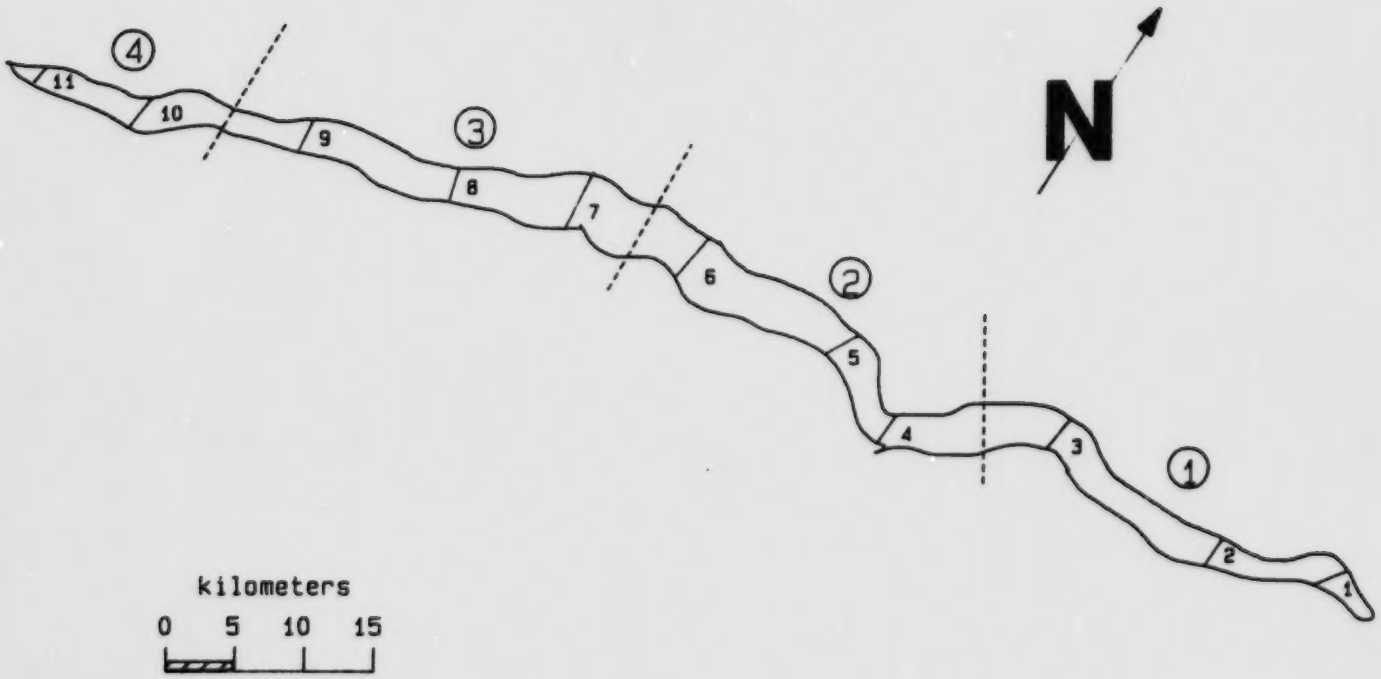


Fig. 8. Map of Francois Lake showing areas and transects.

Table 5a - Tow summary for Francois Lake

SURVEY #	SAMPLE DATE	TOW	AREA	SAMPLE TIME	DURATION (min)	DEPTH (m)	SKY CODE	LIGHT CODE	WIND DIR	SURFACE TEMP (C)	CATCH
7514	SEP 18/75	750042									1 AGE 0
7615	SEP 8/76	760040	2			18					12 AGE 0
	SEP 8/76	760041	1		25	35					NONE
7716	SEP 2/77	770041	2	01:30	45	23					1 AGE 0
7816	AUG 23/78	780072	3	23:20	20	15	3	4	0	13.0	3 AGE 0
											1 AGE 1
											1 OTHER
											4 SCULPIN
											1 WHITEFISH
	AUG 24/78	780073	4	01:52	20	26	2	4	0	13.0	1 SCULPIN
	AUG 25/78	780074	1	21:44	20	15	6	3	0	15.5	17 AGE 0
											2 AGE 2+
											1 WHITEFISH
	AUG 26/78	780075	2	00:43	20	20	3	4	0	15.5	7 AGE 0
											7 SCULPIN
											1 WHITEFISH
8009	AUG 26/80	800033	4	21:20	20	15	3	3	6	11.5	2 AGE 0
											1 AGE 1
											6 SCULPIN
											1 WHITEFISH
	AUG 27/80	800034	3	00:10	20	22	3	3	0	12.5	4 AGE 0
											4 SCULPIN
											3 WHITEFISH
	AUG 29/80	800035	1	22:30	20	30	3	4	6	12.5	1 AGE 0
											14 SCULPIN
											1 WHITEFISH
	AUG 30/80	800036	2	00:15	20	30	3	4	6	12.0	6 SCULPIN
											52 WHITEFISH

Table 5b - Trawl statistics by survey for Francois Lake

SURVEY#	DATES	CATCH		LENGTH (mm)					WEIGHT (g)				
		SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
7514	SEP 18/75	AGE 0	1	77.00	77	77	0.00	0.00	5.84	5.84	5.84	0.00	0.00
7615	SEP 8/76	AGE 0	12	61.33	73	41	10.92	119.22	2.90	4.54	0.82	1.27	1.62
7716	SEP 2/77	AGE 0	1	86.00	86	86	0.00	0.00	8.06	8.06	8.06	0.00	0.00
7816	AUG 23-26/78	AGE 0	27	58.44	74	50	6.67	44.54	2.33	4.49	1.50	0.78	0.61
		AGE 1	1	136.00	136	136	0.00	0.00	34.16	34.16	34.16	0.00	0.00
		AGE 2+	2	300.00	300	300	0.00	0.00					
		OTHER	1	31.00	31	31	0.00	0.00	0.40	0.40	0.40	0.00	0.00
		SCULPIN	13	17.00	61	11	13.31	177.17	0.24	2.61	0.02	0.71	0.51
		WHITEFISH	3	40.33	42	37	2.36	5.56	0.66	0.79	0.47	0.14	0.02
8009	AUG 26-30/80	AGE 0	7	62.14	68	53	4.39	19.27	2.85	3.46	1.84	0.50	0.25
		AGE 1	1	71.00	71	71	0.00	0.00	4.18	4.18	4.18	0.00	0.00
		SCULPIN	30	11.27	19	10	2.13	4.53	0.03	0.11	0.01	0.02	0.00
		WHITEFISH	57	63.88	96	12	21.63	467.86	2.95	8.00	0.03	2.24	5.02

Table 5c - Trawl statistics by tow for Francois Lake

TRAWL					CATCH		LENGTH (mm)					WEIGHT (g)				
AREA	DATE	TOW	DEPTH (m)	DURATION (min)	SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
SURVEY # 7514																
	SEP 18/75	750042			AGE 0	1	77.00	77	77	0.00	0.00	5.84	5.84	5.84	0.00	0.00
SURVEY # 7615																
2	SEP 8/76	760040	18		AGE 0	12	61.33	73	41	10.92	119.22	2.90	4.54	0.82	1.27	1.62
1	SEP 8/76	760041	35	25	NO FISH											
SURVEY # 7716																
2	SEP 2/77	770041	23	45	AGE 0	1	86.00	86	86	0.00	0.00	8.06	8.06	8.06	0.00	0.00
SURVEY # 7816																
3	AUG 23/78	780072	15	20	AGE 0	3	58.33	64	55	4.03	16.22	2.34	2.88	2.00	0.39	0.15
					AGE 1	1	136.00	136	136	0.00	0.00	34.16	34.16	34.16	0.00	0.00
					OTHER	1	31.00	31	31	0.00	0.00	0.40	0.40	0.40	0.00	0.00
					SCULPIN	4	24.25	61	11	21.23	450.69	0.68	2.61	0.02	1.12	1.25
					WHITEFISH	1	37.00	37	37	0.00	0.00	0.47	0.47	0.47	0.00	0.00
4	AUG 24/78	780073	26	20	SCULPIN	1	12.00	12	12	0.00	0.00	0.02	0.02	0.02	0.00	0.00
1	AUG 25/78	780074	15	20	AGE 0	17	57.35	71	50	6.34	40.23	2.17	3.65	1.50	0.69	0.48
					AGE 2+	2	300.00	300	300	0.00	0.00					
					WHITEFISH	1	42.00	42	42	0.00	0.00	0.79	0.79	0.79	0.00	0.00
2	AUG 26/78	780075	20	20	AGE 0	7	61.14	74	51	7.55	56.98	2.71	4.49	1.60	0.95	0.91
					SCULPIN	7	13.57	15	12	0.90	0.82	0.03	0.04	0.02	0.00	0.00
					WHITEFISH	1	42.00	42	42	0.00	0.00	0.72	0.72	0.72	0.00	0.00

Table 5c - Trawl statistics by tow for Francois Lake

TRAWL					CATCH		LENGTH (mm)					WEIGHT (g)				
AREA	DATE	TOW	DEPTH (m)	DURATION (min)	SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
SURVEY # 8009																
4	AUG 26/80	800033	15	20	AGE 0	2	58.00	63	53	5.00	25.00	2.41	2.99	1.84	0.57	0.33
					AGE 1	1	71.00	71	71	0.00	0.00	4.18	4.18	4.18	0.00	0.00
					SCULPIN	6	10.67	12	10	0.75	0.56	0.01	0.02	0.02	0.00	0.00
					WHITEFISH	1	39.00	39	39	0.00	0.00	0.34	0.34	0.34	0.00	0.00
3	AUG 27/80	800034	22	20	AGE 0	4	63.75	68	60	3.03	9.19	3.03	3.46	2.57	0.37	0.13
					SCULPIN	4	12.25	19	10	3.90	15.19	0.05	0.11	0.02	0.04	0.00
					WHITEFISH	3	38.67	41	37	1.70	2.89	0.59	0.72	0.51	0.09	0.00
1	AUG 29/80	800035	30	20	AGE 0	1	64.00	64	64	0.00	0.00	3.00	3.00	3.00	0.00	0.00
					SCULPIN	14	10.93	15	10	1.53	2.35	0.02	0.04	0.02	0.00	0.00
					WHITEFISH	1	39.00	39	39	0.00	0.00	0.61	0.61	0.61	0.00	0.00
2	AUG 30/80	800036	30	20	SCULPIN	6	12.00	15	10	2.16	4.67	0.04	0.06	0.02	0.02	0.00
					WHITEFISH	52	66.29	96	12	21.13	446.40	3.18	8.00	0.03	2.21	4.89

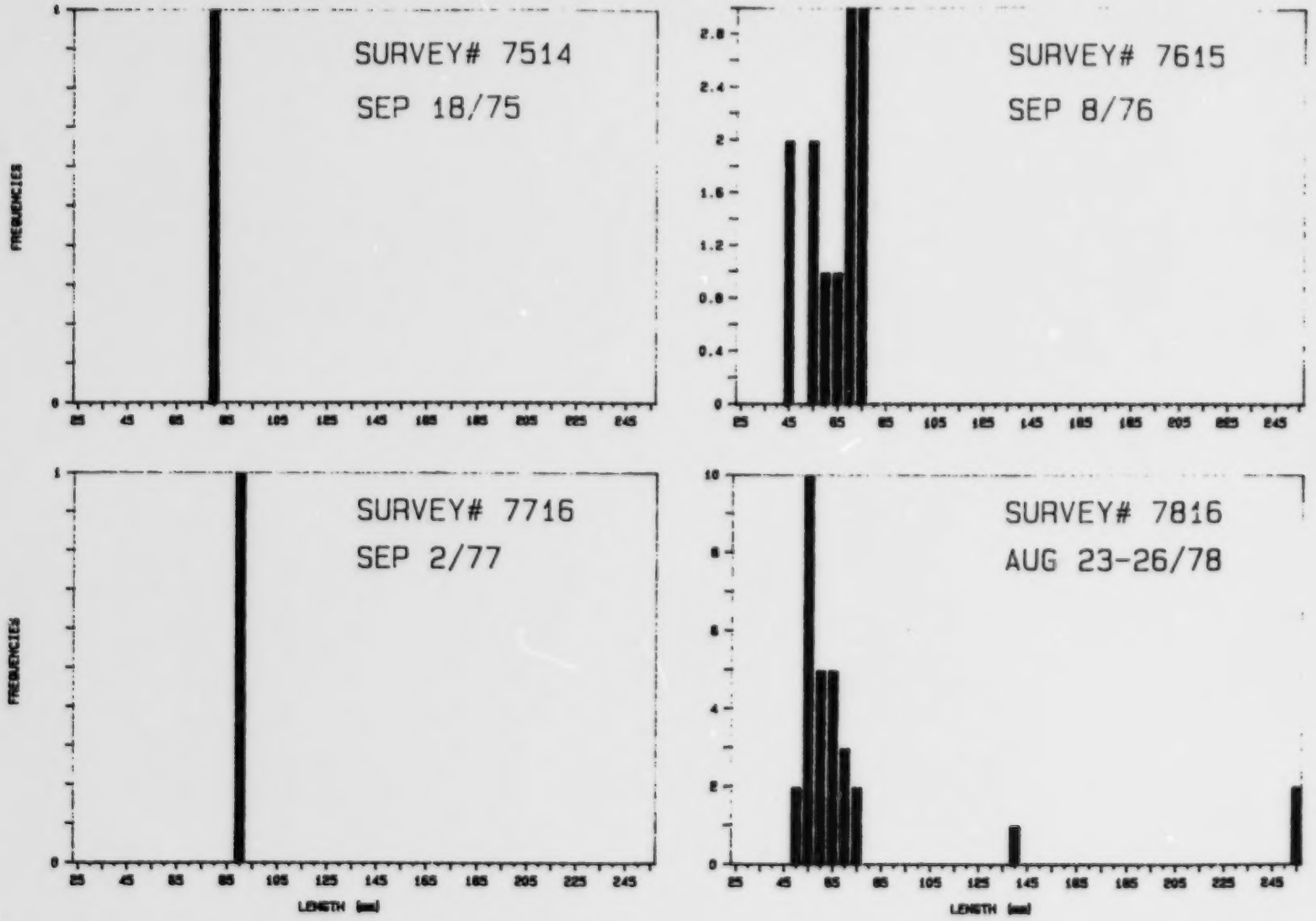


Fig. 9. Sockeye (O. nerka) length frequencies in Francois Lake.

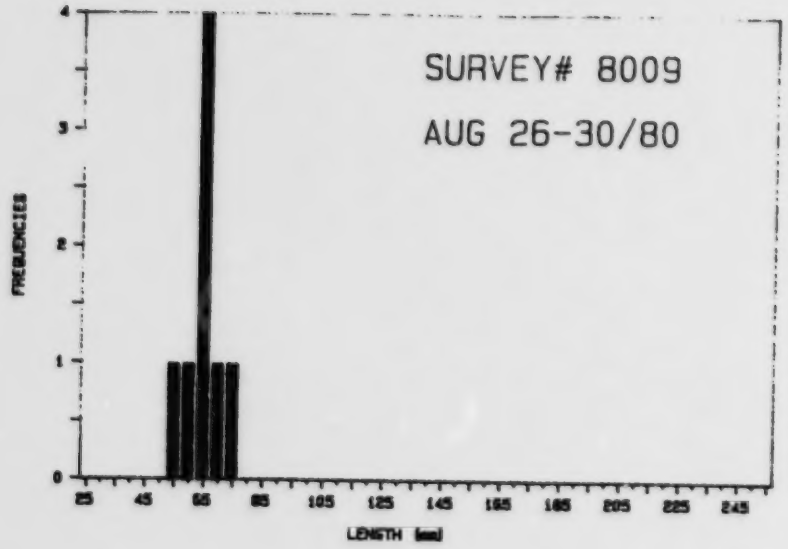


Fig. 9. Continued.

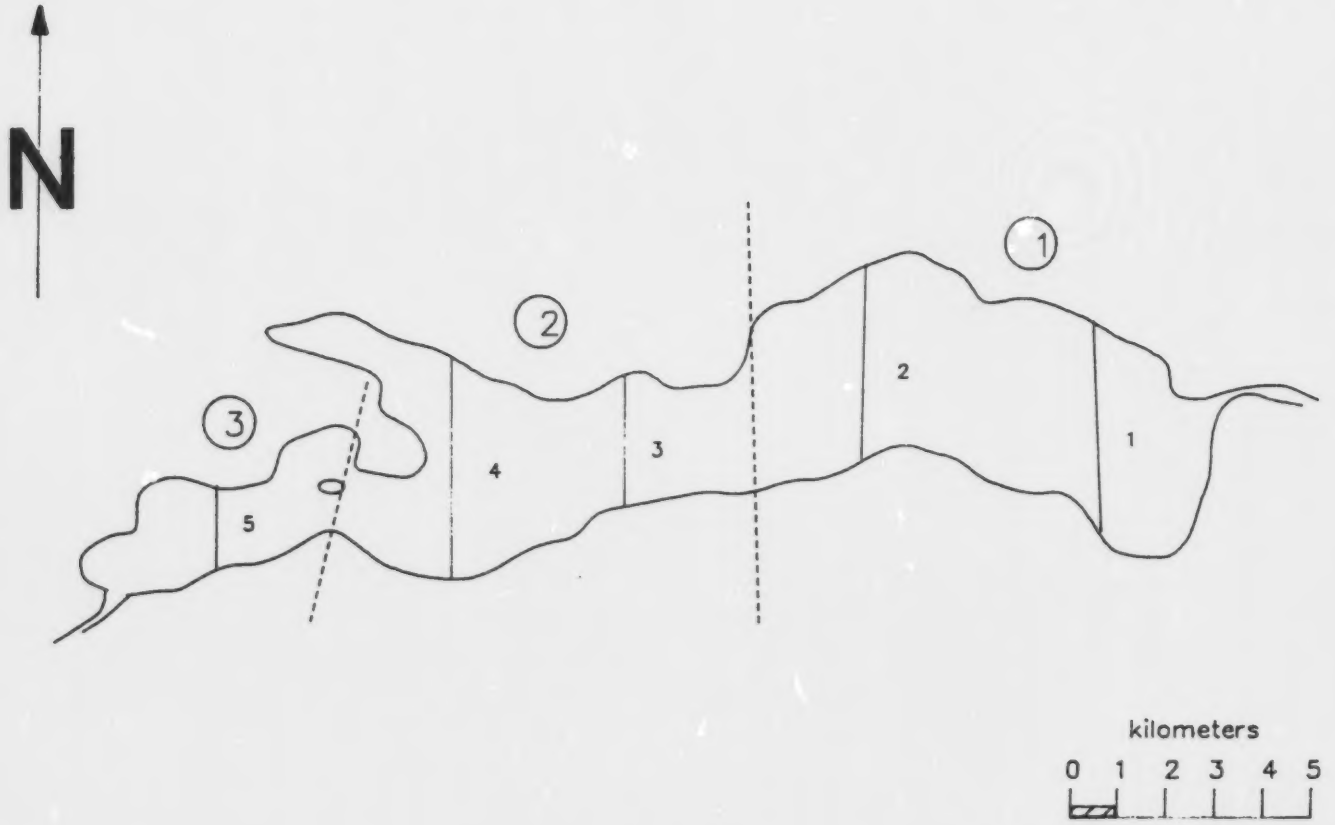


Fig. 10. Map of Fraser Lake showing areas and transects.

Table 6a - Tow summary for Fraser Lake

SURVEY #	SAMPLE DATE	TOW	AREA	SAMPLE TIME	DURATION (min)	DEPTH (m)	SKY CODE	LIGHT CODE	WIND DIR	SURFACE TEMP (C)	CATCH
7513	SEP 16/75	750040	3			20					49 AGE 0
	SEP 16/75	750041	1								68 AGE 0
7614	SEP 5/76	760038			10	14					95 AGE 0
	SEP 5/76	760039	1		7	16					129 AGE 0
7715	SEP 1/77	770038	1		5	18					60 AGE 0
											1 OTHER
											2 WHITEFISH
	SEP 1/77	770039	3		8	17					75 AGE 0
											1 CYPRIN
											1 OTHER
											1 SCULPIN
	SEP 1/77	770040	3		10	19					74 WHITEFISH
											21 AGE 0
											34 WHITEFISH
7817	AUG 26/78	780076	3	21:37	5	05	3	3	0	17.0	2 AGE 0
	AUG 26/78	780077	3	22:10	5	18	3	3	0	17.0	34 AGE 0
											1 AGE 1
	AUG 26/78	780078	2	23:44	5	20	3	3	0	17.0	2 OTHER
											104 AGE 0
											1 AGE 1
	AUG 27/78	780079	1	01:40	10	12	3	4	0	17.0	2 WHITEFISH
											26 AGE 0
											1 OTHER
											14 SCULPIN
8010	AUG 30/80	800037	3	20:57	7	22	3	4	0	13.0	47 AGE 0
	AUG 30/80	800038	2	22:10	1	07	3	4	0	13.0	17 WHITEFISH
											1 AGE 0
	AUG 30/80	800039	2	22:15	5	15	3	4	0	13.0	4 SCULPIN
											49 AGE 0
	AUG 30/80	800040	1	00:15	5	15	3	4	6	13.0	1 SCULPIN
											55 AGE 0
											1 SCULPIN
8211	AUG 22/82	820041	3	20:36	10	13	1	4	0	16.0	30 AGE 0
	AUG 22/82	820042	2	22:09	10	13	1	4	3	16.0	2 WHITEFISH
	AUG 22/82	820043	1	23:48	3	07	1	4	3	16.0	23 AGE 0
											11 AGE 0

Table 6b - Trawl statistics by survey for Fraser Lake

SURVEY#	DATES	CATCH		LENGTH (mm)					WEIGHT (g)				
		SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
7513	SEP 16/75	AGE 0	117	72.56	89	49	8.74	76.33	4.81	8.55	1.45	1.49	2.21
7614	SEP 5/76	AGE 0	224	72.25	92	49	7.26	52.76	4.46	9.41	1.27	1.40	1.95
7715	SEP 1/77	AGE 0	156	70.19	95	49	8.41	70.74	4.27	10.33	1.38	1.57	2.46
		CYPRINID	1	43.00	43	43	0.00	0.00	1.01	1.01	1.01	0.00	0.00
		OTHER	2	94.00	133	55	39.00	1521.00	12.93	24.48	1.37	11.56	133.52
		SCULPIN	1	65.00	65	65	0.00	0.00	3.68	3.68	3.68	0.00	0.00
		WHITEFISH	110	92.53	150	35	30.89	954.23	10.15	33.75	0.51	7.13	50.79
7817	AUG 26-27/78	AGE 0	166	67.55	∞	40	9.70	94.09	3.74	7.55	0.72	1.51	2.28
		AGE 1	2	174.00	188	160	14.00	196.00	76.93	91.95	61.90	15.02	225.75
		OTHER	3	163.33	240	100	57.93	3355.88	91.51	163.24	13.09	61.48	3779.79
		SCULPIN	14	22.29	33	11	6.94	48.20	0.17	0.46	0.01	0.14	0.02
		WHITEFISH	2	48.50	75	22	26.50	702.25	1.99	3.80	0.18	1.81	3.28
8010	AUG 30/80	AGE 0	152	63.11	83	40	9.00	81.03	2.96	6.54	0.70	1.19	1.41
		SCULPIN	6	17.00	34	9	9.80	96.00	0.12	0.36	0.01	0.15	0.02
		WHITEFISH	17	87.53	148	34	26.67	711.31	8.75	35.80	0.29	7.85	61.60
8211	AUG 22/82	AGE 0	64	58.48	82	41	7.77	60.34	2.39	6.10	0.77	1.00	1.00
		WHITEFISH	2	82.50	85	80	2.50	6.25	5.92	6.26	5.58	0.34	0.12

Table 6c - Trawl statistics by tow for Fraser Lake

TRAWL					CATCH		LENGTH (mm)					WEIGHT (g)				
AREA	DATE	TOW	DEPTH (m)	DURATION (min)	SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
SURVEY # 7513																
3	SEP 16/75	750040	20		AGE 0	49	70.20	88	49	9.83	96.57	4.50	8.12	1.45	1.73	3.01
1	SEP 16/75	750041			AGE 0	68	74.25	89	56	7.41	54.89	5.03	8.55	2.45	1.23	1.51
SURVEY # 7614																
	SEP 5/76	760038	14	10	AGE 0	95	70.78	92	54	7.77	60.38	4.21	9.41	1.73	1.44	2.09
1	SEP 5/76	760039	16	7	AGE 0	129	73.33	88	49	6.66	44.39	4.64	8.46	1.27	1.33	1.77
SURVEY # 7715																
1	SEP 1/77	770038	18	5	AGE 0	60	69.75	91	57	6.72	45.15	3.98	8.69	2.16	1.20	1.45
					OTHER	1	55.00	55	55	0.00	0.00	1.37	1.37	1.37	0.00	0.00
					WHITEFISH	2	72.00	82	62	10.00	100.00	4.20	5.61	2.79	1.41	1.99
3	SEP 1/77	770039	17	8	AGE 0	75	70.84	86	49	8.19	67.07	4.44	7.07	1.38	1.44	2.07
					CYPRINID	1	43.00	43	43	0.00	0.00	1.01	1.01	1.01	0.00	0.00
					OTHER	1	133.00	133	133	0.00	0.00	24.48	24.48	24.48	0.00	0.00
					SCULPIN	1	65.00	65	65	0.00	0.00	3.68	3.68	3.68	0.00	0.00
					WHITEFISH	74	93.76	150	36	31.88	1016.51	10.45	33.75	0.51	7.53	56.77
3	SEP 1/77	770040	19	10	AGE 0	21	69.10	95	51	12.40	153.71	4.49	10.33	1.44	2.52	6.36
					WHITEFISH	34	91.06	133	35	28.96	838.70	9.86	20.80	0.52	6.19	38.30
SURVEY # 7817																
3	AUG 26/78	780076	05	5	AGE 0	2	74.00	77	71	3.00	9.00	4.91	5.45	4.37	0.54	0.29
3	AUG 26/78	780077	18	5	AGE 0	34	68.15	86	41	10.02	100.48	3.84	7.37	0.77	1.59	2.51
					AGE 1	1	188.00	188	188	0.00	0.00	91.95	91.95	91.95	0.00	0.00
					OTHER	2	195.00	240	150	45.00	2025.00	130.72	163.24	98.20	32.52	1057.55
2	AUG 26/78	780078	20	5	AGE 0	104	68.97	85	47	8.53	72.72	3.92	7.55	1.19	1.40	1.97
					AGE 1	1	160.00	160	160	0.00	0.00	61.90	61.90	61.90	0.00	0.00
					WHITEFISH	2	48.50	75	22	26.50	702.25	1.99	3.80	0.18	1.81	3.28
1	AUG 27/78	780079	12	10	AGE 0	26	60.58	85	40	10.84	117.40	2.76	7.04	0.72	1.48	2.19
					OTHER	1	100.00	100	100	0.00	0.00	13.09	13.09	13.09	0.00	0.00
					SCULPIN	14	22.29	33	11	6.94	48.20	0.17	0.46	0.02	0.14	0.02

Table 6c - Trawl statistics by tow for Fraser Lake

TRAWL					CATCH		LENGTH (mm)					WEIGHT (g)				
AREA	DATE	TOW	DEPTH (m)	DURATION (min)	SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
SURVEY # 8010																
3	AUG 30/80	800037	22	7	AGE 0	47	57.89	76	40	9.62	92.52	2.33	4.90	0.70	1.05	1.10
					WHITEFISH	17	87.53	148	34	26.67	711.31	8.75	35.80	0.29	7.85	61.60
2	AUG 30/80	800038	07	1	AGE 0	1	72.00	72	72	0.00	0.00	4.71	4.71	4.71	0.00	0.00
					SCULPIN	4	10.25	12	9	1.09	1.19	0.02	0.03	0.02	0.00	0.00
2	AUG 30/80	800039	15	5	AGE 0	49	64.69	77	46	7.22	52.17	3.16	5.10	1.11	0.97	0.95
					SCULPIN	1	27.00	27	27	0.00	0.00	0.29	0.29	0.29	0.00	0.00
1	AUG 30/80	800040	15	5	AGE 0	55	65.98	83	51	7.95	63.22	3.29	6.54	1.25	1.26	1.59
					SCULPIN	1	34.00	34	34	0.00	0.00	0.36	0.36	0.36	0.00	0.00
SURVEY # 8211																
3	AUG 22/82	820041	13	10	AGE 0	30	60.57	82	46	7.33	53.71	2.65	6.10	1.10	1.01	1.02
					WHITEFISH	2	82.50	85	80	2.50	6.25	5.92	6.26	5.58	0.34	0.12
2	AUG 22/82	820042	13	10	AGE 0	23	57.17	77	41	8.65	74.75	2.28	5.39	0.77	1.03	1.06
1	AUG 22/82	820043	07	3	AGE 0	11	55.55	68	49	4.92	24.25	1.92	3.59	1.30	0.59	0.35

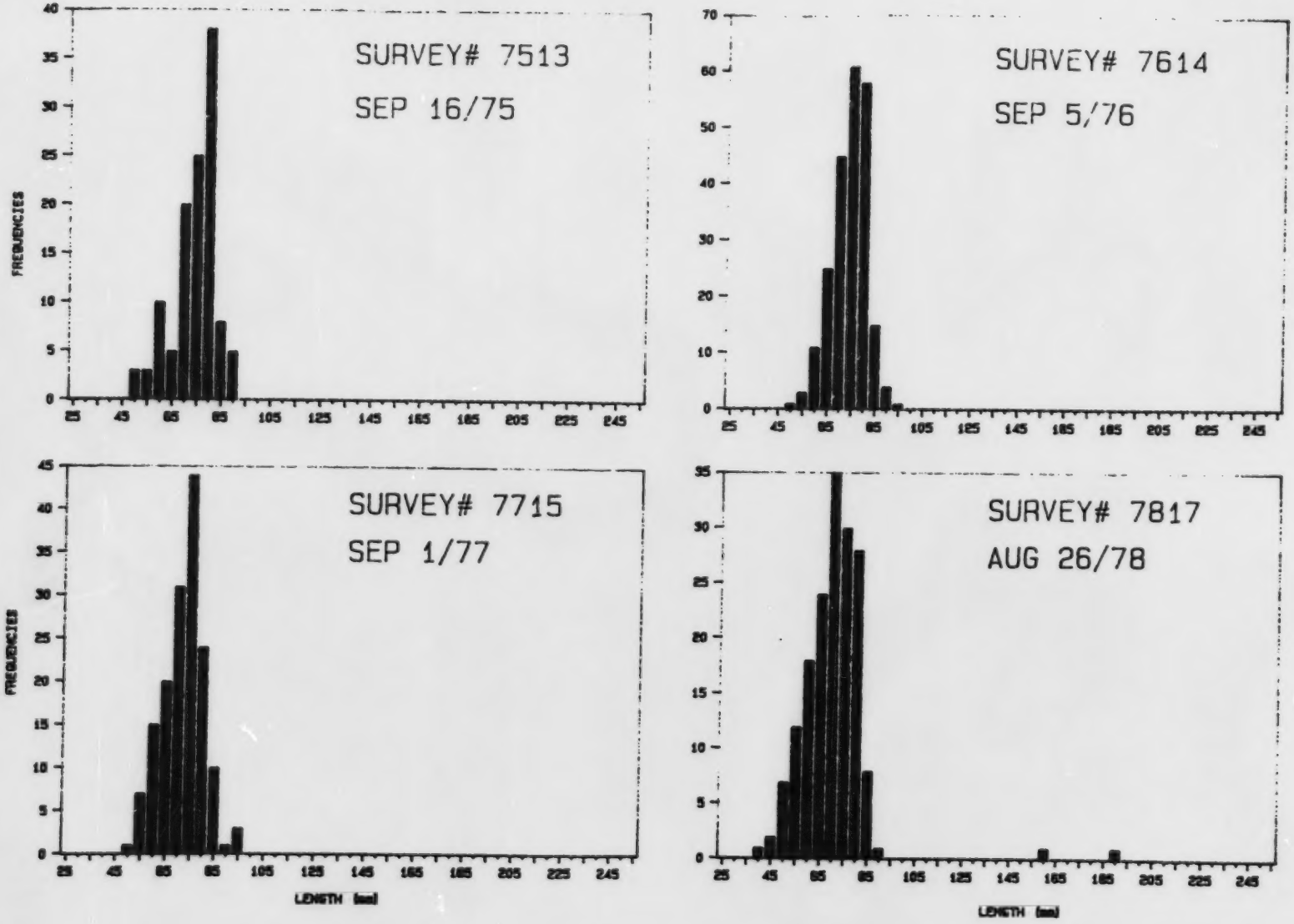
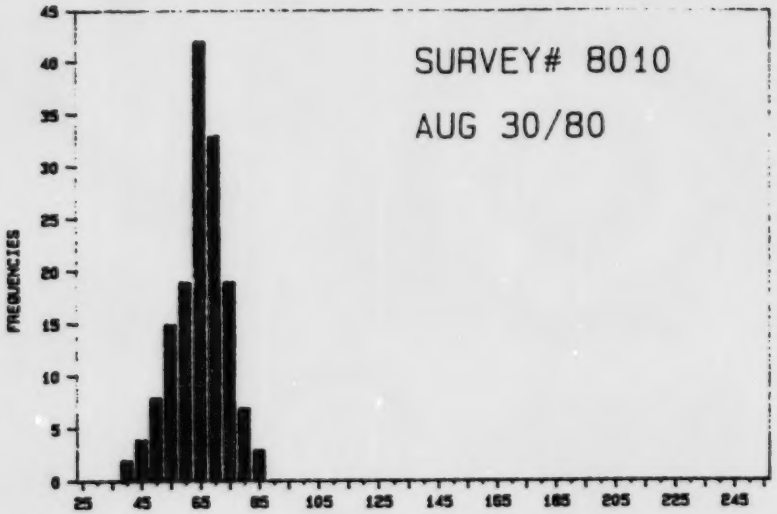


Fig. 11. Sockeye (O. nerka) length frequencies in Fraser Lake.



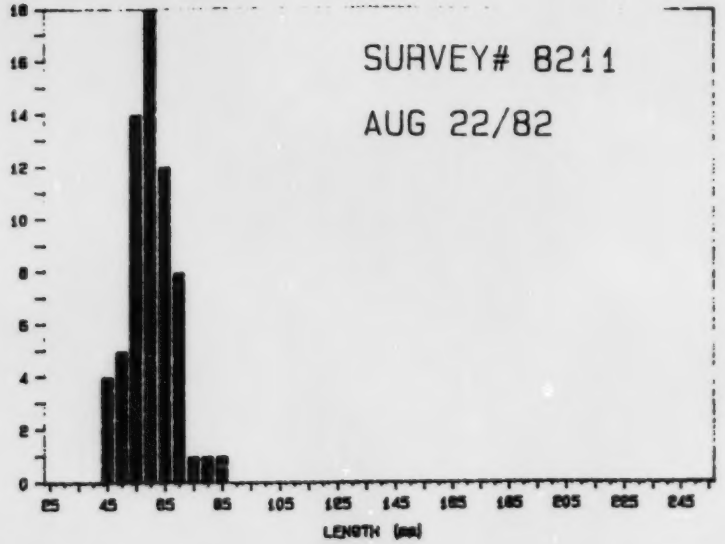


Fig. 11. Continued

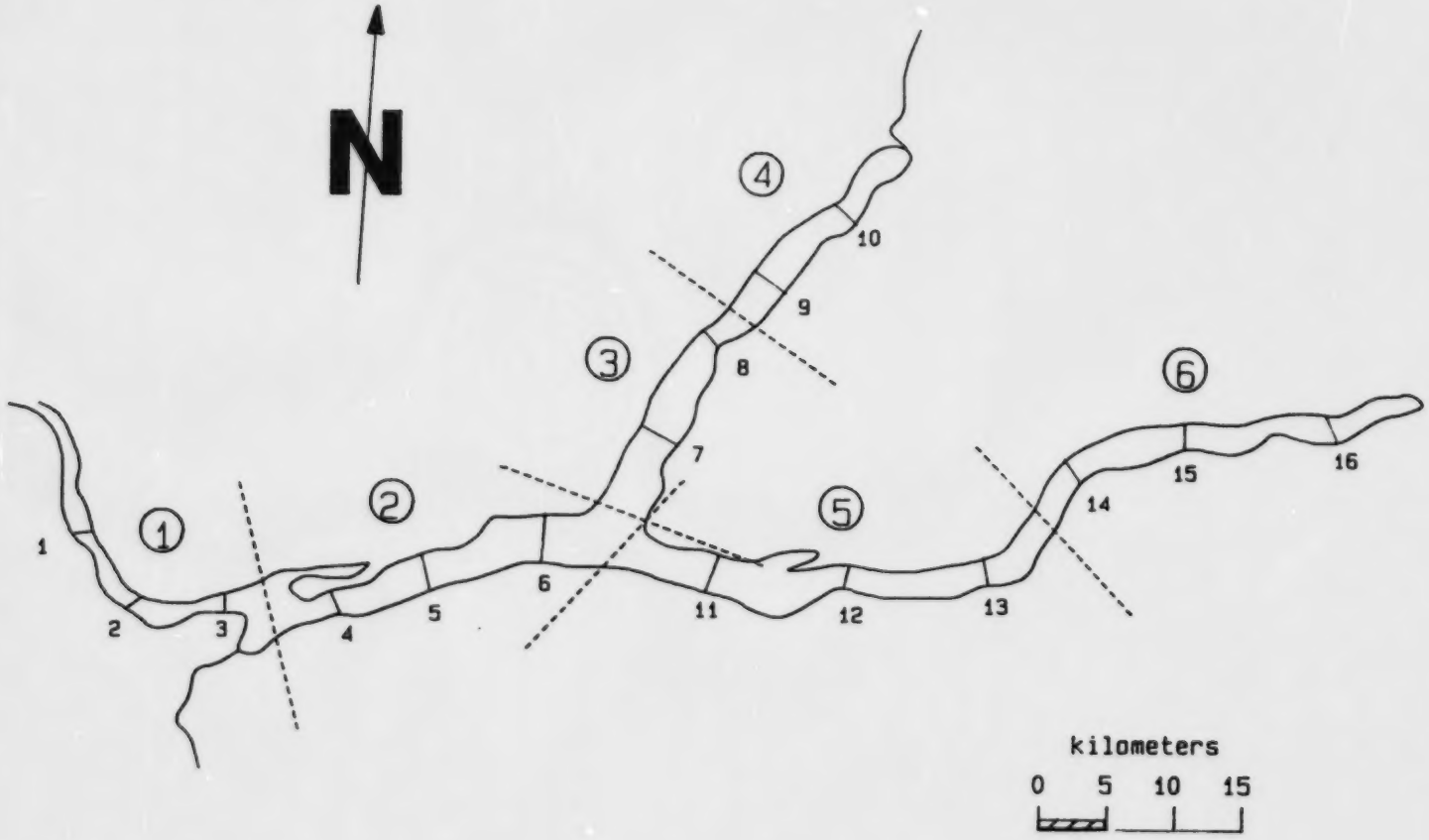


Fig. 12. Map of Quesnel Lake showing areas and transects.

Table 7a - Tow summary for Quesnel Lake

SURVEY #	SAMPLE DATE	TOW	AREA	SAMPLE TIME	DURATION (min)	DEPTH (m)	SKY CODE	LIGHT CODE	WIND DIR	SURFACE TEMP (C)	CATCH
7610	AUG 19/76	760026	3		60	17					1 AGE 0
	AUG 22/76	760027	2		50	22					NONE
	AUG 26/76	760028	5		30	22					1 AGE 2+
7717	SEP 8/77	770042	6	23:20	60	23					12 AGE 0
	SEP 9/77	770043	4	02:45	20	20					1 AGE 2+
											5 WHITEFISH
	SEP 9/77	770044	4	03:30	15	22					2 AGE 0
											2 WHITEFISH
7808	JUN 13/78	780029	4	22:37	10	10	2	4	0	12.5	53 AGE 0
	JUN 14/78	780030	3	01:08	10	7	3	3	5	10.5	64 AGE 0
	JUN 14/78	780031	6	23:58	10	7	2	3	0	9.5	4 AGE 0
											1 OTHER
	JUN 15/78	780032	5	01:21	15	5	3	3	0	10.5	7 AGE 0
											1 OTHER
	JUN 15/78	780033	1	22:23	10	6	1	2	2	11.5	12 AGE 0
	JUN 16/78	780034	2	00:30	15	7	2	4	0	11.0	16 AGE 0
7818	AUG 27/78	780080	2	22:57	5	18	3	3	8	16.0	17 AGE 0
	AUG 28/78	780081	3	00:56	5	20	3	3	0	16.0	42 AGE 0
	AUG 28/78	780082	4	02:32	5	20	3	4	0	13.5	55 AGE 0
	AUG 28/78	780083	5	22:26	5	18	1	3	2	13.5	65 AGE 0
	AUG 29/78	780084	6	02:05	10	10	1	3	0	16.0	13 AGE 0
	AUG 29/78	780085	1	21:53	10	17	3	3	0	16.0	112 AGE 0
7823	OCT 4/78	780099	1	20:00	7	20	1	3	0	11.5	6 AGE 0
											1 AGE 2+
	OCT 4/78	780100	2	22:38	5	20	3	3	2	11.5	60 AGE 0
											1 WHITEFISH
	OCT 5/78	780101	3	00:57	5	20	3	3	1	11.5	51 AGE 0
	OCT 5/78	780102	4	03:03	20	30	2	3	0	11.0	1 AGE 1
	OCT 5/78	780103	6	20:35	15	12	2	3	0	9.0	4 AGE 0
	OCT 5/78	780104	5	23:17	20	20	1	3	1	10.5	11 AGE 0
8110	AUG 27/81	810027	4	20:57	20	19	2	3	0	19.0	NONE
	AUG 27/81	810028	3	23:27	20	7	2	3	0	18.5	NONE
	AUG 28/81	810029	6	22:29	20	19	3	3	2	16.5	1 AGE 0
	AUG 29/81	810030	5	00:56	20	25	3	3	0	17.5	NONE
	AUG 29/81	810031	2	23:18	20	7	1	3	4	17.5	NONE
8201	JUN 22/82	820001	1	22:33	10	7	1	3	3	17.5	1 AGE 0
	JUN 23/82	820002	2	01:45	1	7	1	3	3	13.5	94 AGE 0
	JUN 23/82	820003	4	22:01	10	7	1	2	0	15.0	78 AGE 0
	JUN 24/82	820004	3	00:34	10	7	1	2	0	15.0	10 AGE 0
8207	AUG 10/82	820023	1	21:22	10	13	3	3	0	16.0	11 AGE 0
	AUG 11/82	820024	2	00:05	3	13	3	3	0	16.5	165 AGE 0

Table 7a - Tow summary for Quesnel Lake

SURVEY #	SAMPLE DATE	TOW	AREA	SAMPLE TIME	DURATION (min)	DEPTH (m)	SKY CODE	LIGHT CODE	WIND DIR	SURFACE TEMP (C)	CATCH
	AUG 11/82	820025	6	21:19	5	13	3	3	0	14.0	18 AGE 0
	AUG 12/82	820026	5	01:16	5	13	6	3	1	16.0	38 AGE 0
	AUG 12/82	820027	3	02:19	10	13	6	3	1	14.5	9 AGE 0
	AUG 12/82	820028	4	21:04	15	13	6	3	0	15.5	39 AGE 0
8212	OCT 13/82	820044	1	20:13	15	19	1	4	0	10.0	13 AGE 0
	OCT 13/82	820045	2	22:43	3	25	1	4	0	10.0	24 AGE 0
8213	OCT 26/82	820046	4	19:42	20	25	3	3	0	9.0	68 AGE 0
	OCT 26/82	820047	3	22:15	15	25	3	3	5	8.5	35 AGE 0
	OCT 28/82	820048	5	21:25	20	13	1	5	0	7.0	37 AGE 0
	OCT 28/82	820049	5	22:00	20	43	1	5	0	7.0	35 AGE 0
	OCT 29/82	820050	1	01:57	20	37	1	5	0	6.5	2 AGE 0

Table 7b - Trawl statistics by survey for Quesnel Lake

SURVEY#	DATES	CATCH		LENGTH (mm)					WEIGHT (g)				
		SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
7610	AUG 19-26/76	AGE 0	1	74.00	74	74	0.00	0.00	4.18	4.18	4.18	0.00	0.00
7717	SEP 8-9/77	AGE 0	14	92.07	104	77	8.46	71.64	9.41	13.40	5.29	2.56	6.55
		AGE 2+	1	194.00	194	194	0.00	0.00	85.96	85.96	85.96	0.00	0.00
		WHITEFISH	7	59.71	80	43	15.30	234.20	2.64	5.05	0.78	1.87	3.50
7808	JUN 13-16/78	AGE 0	156	30.50	39	22	3.13	9.79	0.31	0.70	0.09	0.10	0.01
		OTHER	2	18.50	19	18	0.50	0.25	0.04	0.05	0.03	0.01	0.00
7818	AUG 27-29/78	AGE 0	304	64.75	92	33	7.74	59.93	3.07	9.55	0.38	1.07	1.15
7823	OCT 4-5/78	AGE 0	132	73.61	89	40	6.30	39.75	4.32	8.55	0.58	1.23	1.51
		AGE 1	1	118.00	118	118	0.00	0.00	20.06	20.06	20.06	0.00	0.00
		AGE 2+	1	160.00	160	160	0.00	0.00	70.90	70.90	70.90	0.00	0.00
		WHITEFISH	1	43.00	43	43	0.00	0.00	0.84	0.84	0.84	0.00	0.00
8110	AUG 27-29/81	AGE 0	1	79.00	79	79	0.00	0.00	5.79	5.79	5.79	0.00	0.00
8201	JUN 22-24/82	AGE 0	483	31.24	53	20	3.38	11.43	0.34	1.67	0.07	0.14	0.02
8207	AUG 10-12/82	AGE 0	280	56.02	85	37	7.12	50.69	1.99	6.09	0.47	0.81	0.66
		SCULPIN	1	24.00	24	24	0.00	0.00	0.15	0.15	0.15	0.00	0.00
8212	OCT 13/82	AGE 0	37	70.92	85	62	5.00	24.99	4.01	6.66	2.47	0.85	0.73
8213	OCT 26-29/82	AGE 0	177	70.07	88	45	7.35	54.05	3.80	8.34	0.90	1.23	1.52

Table 7c - Trawl statistics by tow for Quesnel Lake

AREA	DATE	TOW	DEPTH (m)	DURATION (min)	CATCH SPECIES	N	LENGTH (mm) MEAN	MAX	MIN	S.D.	VAR	WEIGHT (g) MEAN	MAX	MIN	S.D.	VAR
SURVEY # 7610																
3	AUG 19/76	760026	17	60	AGE 0	1	74.00	74	74	0.00	0.00	4.18	4.18	4.18	0.00	0.00
2	AUG 22/76	760027	22	50	NO FISH											
5	AUG 26/76	760028	22	30	AGE 2+	1	205.00	205	205	0.00	0.00	91.14	91.14	91.14	0.00	0.00
SURVEY # 7717																
6	SEP 8/77	770042	23	60	AGE 0	12	94.33	104	78	6.88	47.39	10.06	13.40	5.62	2.16	4.65
4	SEP 9/77	770043	20	20	AGE 2+	1	194.00	194	194	0.00	0.00	85.96	85.96	85.96	0.00	0.00
					WHITEFISH	5	60.40	80	44	15.37	236.24	2.65	5.05	0.82	1.89	3.56
4	SEP 9/77	770044	22	15	AGE 0	2	78.50	80	77	1.50	2.25	5.50	5.71	5.29	0.21	0.04
					WHITEFISH	2	58.00	73	43	15.00	225.00	2.61	4.44	0.78	1.83	3.35
SURVEY # 7808																
4	JUN 13/78	780029	10	10	AGE 0	53	30.60	37	24	2.76	7.64	0.32	0.60	0.13	0.09	0.00
3	JUN 14/78	780030	7	10	AGE 0	64	30.44	39	22	2.56	6.56	0.30	0.70	0.09	0.09	0.00
6	JUN 14/78	780031	7	10	AGE 0	4	33.00	39	23	6.16	38.00	0.41	0.63	0.11	0.19	0.04
					OTHER	1	19.00	19	19	0.00	0.00	0.05	0.05	0.05	0.00	0.00
5	JUN 15/78	780032	5	15	AGE 0	7	29.57	32	22	3.29	10.82	0.24	0.33	0.09	0.07	0.00
					OTHER	1	18.00	18	18	0.00	0.00	0.03	0.03	0.03	0.00	0.00
1	JUN 15/78	780033	6	10	AGE 0	12	33.83	39	30	2.34	5.47	0.38	0.60	0.25	0.09	0.00
2	JUN 16/78	780034	7	15	AGE 0	16	27.69	32	24	2.71	7.34	0.19	0.31	0.09	0.08	0.00
SURVEY # 7818																
2	AUG 27/78	780080	18	5	AGE 0	17	63.41	75	33	10.12	102.48	3.11	4.73	0.44	1.10	1.21
3	AUG 28/78	780081	20	5	AGE 0	42	59.98	76	40	6.58	43.31	2.46	4.16	0.66	0.74	0.55
4	AUG 28/78	780082	20	5	AGE 0	55	61.53	77	43	7.46	55.63	2.64	5.04	0.97	0.91	0.82
5	AUG 28/78	780083	18	5	AGE 0	65	64.97	81	45	6.84	46.74	2.99	5.67	0.95	0.97	0.94
6	AUG 29/78	780084	10	10	AGE 0	13	68.46	92	59	7.68	59.02	3.75	9.55	2.08	1.79	3.20
1	AUG 29/78	780085	17	10	AGE 0	112	67.77	84	40	6.70	44.93	3.47	6.83	0.38	0.97	0.95

Table 7c - Trawl statistics by tow for Quesnel Lake

AREA	DATE	TOW	TRAWL DEPTH (m)	TRAWL DURATION (min)	CATCH SPECIES	CATCH N	LENGTH (mm) MEAN	LENGTH (mm) MAX	LENGTH (mm) MIN	LENGTH (mm) S.D.	LENGTH (mm) VAR	WEIGHT (g) MEAN	WEIGHT (g) MAX	WEIGHT (g) MIN	WEIGHT (g) S.D.	WEIGHT (g) VAR
SURVEY # 7823																
1	OCT 4/78	780099	20	7	AGE 0	6	77.50	89	71	6.53	42.58	5.25	8.38	3.70	1.62	2.62
					AGE 2+	1	160.00	160	160	0.00	0.00	70.90	70.90	70.90	0.00	0.00
2	OCT 4/78	780100	20	5	AGE 0	60	75.23	89	40	6.69	44.75	4.65	8.55	0.58	1.25	1.56
					WHITEFISH	1	43.00	43	43	0.00	0.00	0.84	0.84	0.84	0.00	0.00
3	OCT 5/78	780101	20	5	AGE 0	51	71.25	80	61	4.89	23.95	3.80	6.12	2.30	0.89	0.80
4	OCT 5/78	780102	30	20	AGE 1	1	118.00	118	118	0.00	0.00	20.06	20.06	20.06	0.00	0.00
6	OCT 5/78	780103	12	15	AGE 0	4	78.25	87	69	6.46	41.69	5.38	7.65	3.49	1.48	2.20
5	OCT 5/78	780104	20	20	AGE 0	11	71.91	82	65	4.94	24.45	4.01	5.72	2.85	0.93	0.87
SURVEY # 8110																
4	AUG 27/81	810027	19	20	NO FISH											
3	AUG 27/81	810028	7	20	NO FISH											
6	AUG 28/81	810029	19	20	AGE 0	1	79.00	79	79	0.00	0.00	5.79	5.79	5.79	0.00	0.00
5	AUG 29/81	810030	25	20	NO FISH											
2	AUG 29/81	810031	7	20	NO FISH											
SURVEY # 8201																
1	JUN 22/82	820001	7	10	AGE 0	1	40.00	40	40	0.00	0.00	0.62	0.62	0.62	0.00	0.00
2	JUN 23/82	820002	7	1	AGE 0	294	32.17	53	20	3.60	12.98	0.37	1.67	0.07	0.15	0.02
4	JUN 23/82	820003	7	10	AGE 0	178	29.57	36	23	2.13	4.55	0.28	0.47	0.09	0.07	4.66E-3
3	JUN 24/82	820004	7	10	AGE 0	10	32.60	36	28	2.24	5.04	0.36	0.48	0.19	0.08	6.1E-3

Table 7c - Trawl statistics by tow for Quesnel Lake

AREA	TRAWL DATE	TOW	DEPTH (m)	DURATION (min)	CATCH SPECIES	N	LENGTH (mm) MEAN	MAX	MIN	S.D.	VAR	WEIGHT (g) MEAN	MAX	MIN	S.D.	VAR
SURVEY # 8207																
1	AUG 10/82	820023	13	10	AGE 0	11	64.00	75	50	6.65	44.18	2.95	5.11	1.37	1.02	1.04
					SCULPIN	1	24.00	24	24	0.00	0.00	0.15	0.15	0.15	0.00	0.00
2	AUG 11/82	820024	13	3	AGE 0	165	56.86	85	40	6.41	41.09	2.09	6.09	0.69	0.77	0.59
6	AUG 11/82	820025	13	5	AGE 0	18	54.89	66	48	5.08	25.77	1.69	2.60	0.91	0.54	0.29
5	AUG 12/82	820026	13	5	AGE 3											
					AGE 0	38	56.21	74	38	6.78	45.90	2.04	4.32	0.51	0.76	0.58
3	AUG 12/82	820027	13	10	AGE 0	9	59.33	65	42	6.93	48.00	2.35	2.95	0.96	0.66	0.44
4	AUG 12/82	820028	13	15	AGE 0	39	49.79	64	37	6.86	47.03	1.34	3.06	0.47	0.61	0.37
SURVEY # 8212																
1	OCT 13/82	820044	19	15	AGE 0	13	70.85	85	62	6.70	44.90	4.02	6.66	2.47	1.18	1.38
2	OCT 13/82	820045	25	3	AGE 0	24	70.96	76	63	3.77	14.21	4.01	5.13	2.64	0.61	0.38
SURVEY # 8213																
4	OCT 26/82	820046	25	20	AGE 0	68	69.29	83	48	7.70	59.27	3.72	6.09	1.27	1.22	1.49
3	OCT 26/82	820047	25	15	AGE 0	35	71.49	88	45	9.01	81.22	4.17	8.34	0.90	1.58	2.49
5	OCT 28/82	820048	13	20	AGE 0	37	70.38	82	59	4.49	20.18	3.69	6.00	1.94	0.83	0.68
5	OCT 28/82	820049	43	20	AGE 0	35	70.20	88	48	6.98	48.73	3.78	7.21	1.07	1.15	1.31
1	OCT 29/82	820050	37	20	AGE 0	2	63.50	68	59	4.50	20.25	2.43	2.66	2.20	0.23	0.05

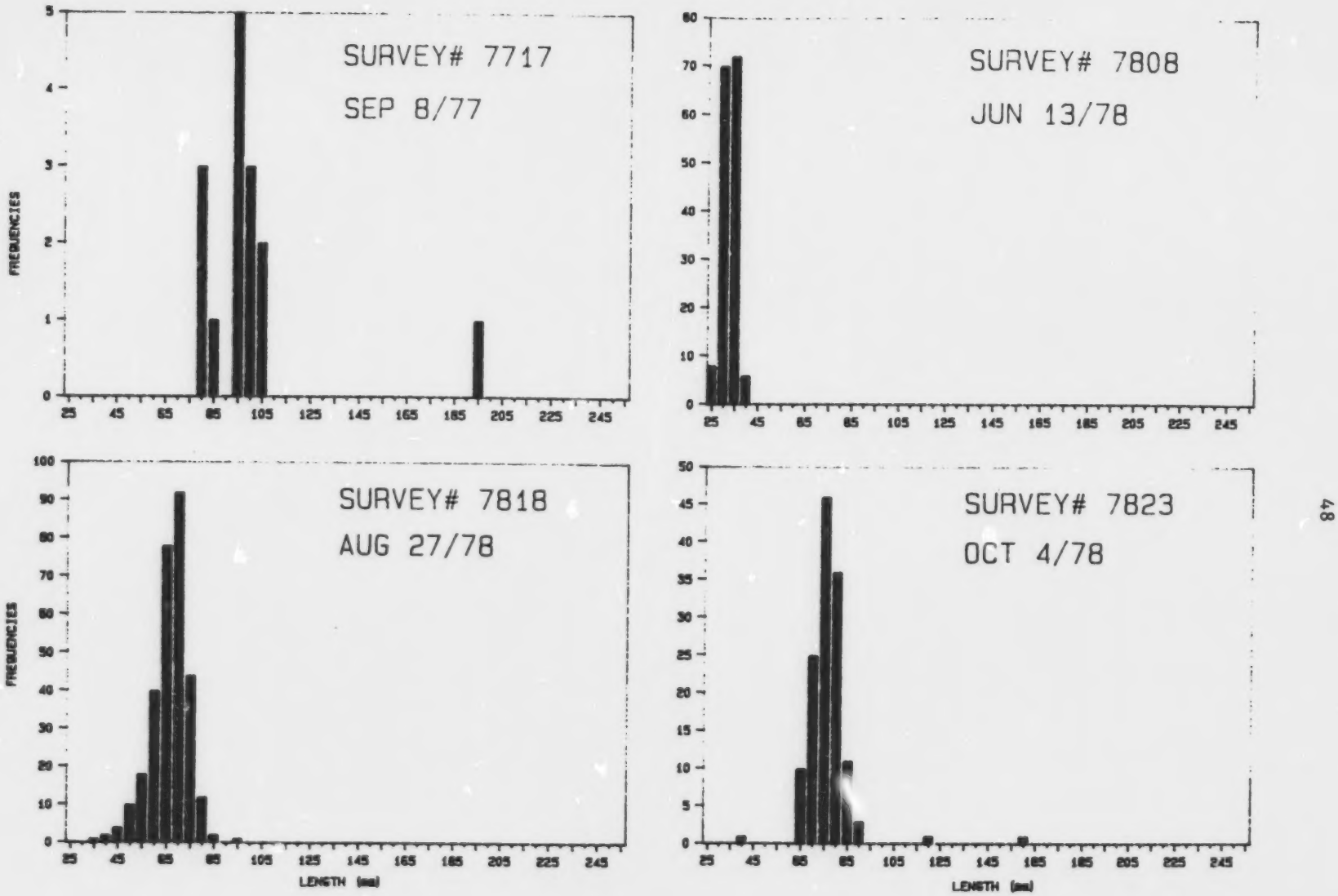


Fig. 13. Sockeye (O. nerka) length frequencies in Quesnel Lake.

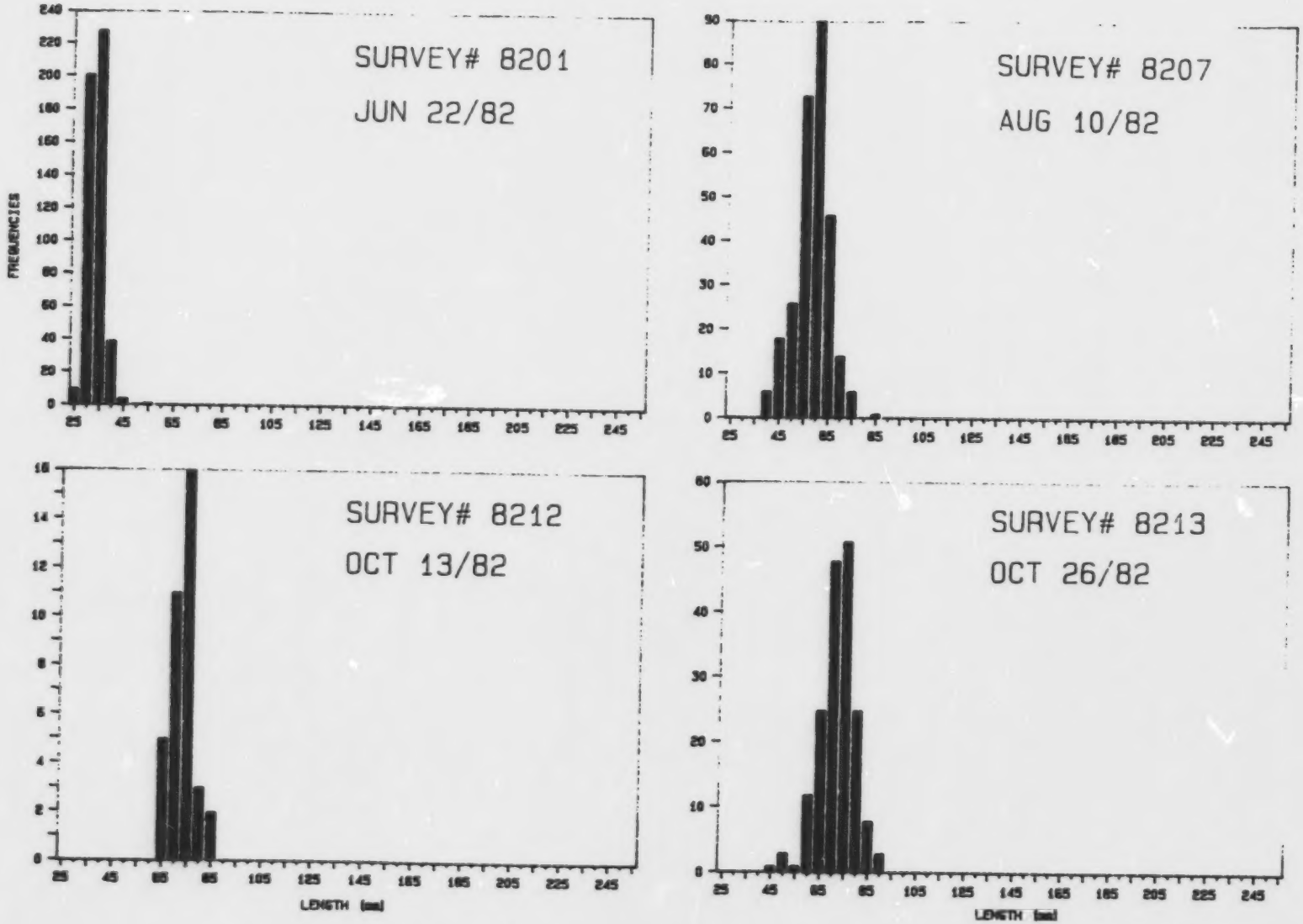


Fig. 13. Continued.

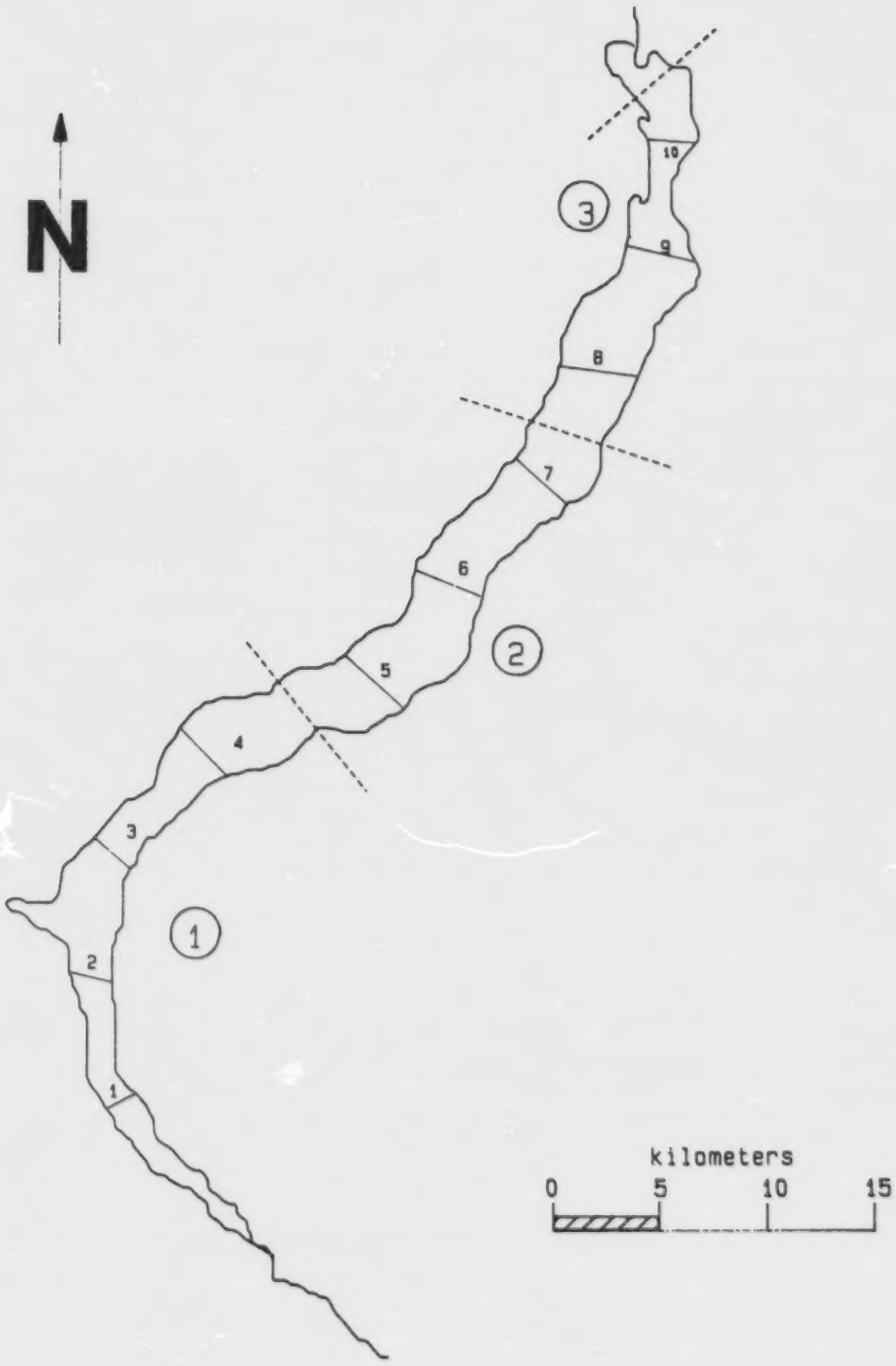


Fig. 14. Map of Adams Lake showing areas and transects.

Table 8a - Tow summary for Adams Lake

SURVEY #	SAMPLE DATE	TOW	AREA	SAMPLE TIME	DURATION (min)	DEPTH (m)	SKY CODE	LIGHT CODE	WIND DIR	SURFACE TEMP (C)	CATCH
7519	OCT 6/75	750055				14	1				97 AGE 0
											1 AGE 1
7622	OCT 20/76	760055	3		30	22	1				49 AGE 0
											2 AGE 1
7723	OCT 16/77	770065	2		10	35	1				7 AGE 2+
7825	OCT 17/78	780108	3	19:20	20	18	1	1	5	11.5	13 AGE 0
											1 AGE 2+
	OCT 17/78	780109	2	21:50	20	20	1	4	0	11.5	16 AGE 0
											1 CYPRINID
	OCT 18/78	780110	1	00:55	20	24	1	3	3	11.5	1 OTHER
											8 AGE 0

Table 8b - Trawl statistics by survey for Adams Lake

SURVEY#	DATES	CATCH		LENGTH (mm)					WEIGHT (g)				
		SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
7519	OCT 6/75	AGE 0	97	47.29	56	35	4.04	16.33	0.75	1.43	0.12	0.26	0.07
		AGE 1	1	97.00	97	97	0.00	0.00	8.56	8.56	8.56	0.00	0.00
7622	OCT 20/76	AGE 0	49	53.00	66	38	6.13	37.55	1.55	2.95	0.61	0.51	0.26
		AGE 1	2	106.00	115	97	9.00	81.00	12.24	14.46	10.02	2.22	4.93
7723	OCT 16/77	AGE 2+	7	183.71	190	173	5.55	30.78	72.63	77.72	60.96	5.40	29.19
7825	OCT 17-18/78	AGE 0	37	35.51	46	25	5.33	28.41	0.51	1.00	0.18	0.20	0.04
		AGE 2+	1	165.00	165	165	0.00	0.00	48.48	48.48	48.48	0.00	0.00
		CYPRINID	1	56.00	56	56	0.00	0.00	2.08	2.08	2.08	0.00	0.00
		OTHER	1	762.00	762	762	0.00	0.00					

Table 8c - Trawl statistics by tow for Adams Lake

TRAWL					CATCH		LENGTH (mm)					WEIGHT (g)				
AREA	DATE	TOW	DEPTH (m)	DURATION (min)	SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
SURVEY # 7519																
	OCT 6/75	750055	14		AGE 0	97	47.29	56	35	4.04	16.33	0.75	1.43	0.12	0.26	0.07
					AGE 1	1	97.00	97	97	0.00	0.00	8.56	8.56	8.56	0.00	0.00
SURVEY # 7622																
3	OCT 20/76	760055	22	30	AGE 0	49	53.00	66	38	6.13	37.55	1.55	2.95	0.61	0.51	0.26
					AGE 1	2	106.00	115	97	9.00	81.00	12.24	14.46	10.02	2.22	4.93
SURVEY # 7723																
2	OCT 16/77	770065	35	10	AGE 2+	7	183.71	190	173	5.55	30.78	72.63	77.72	60.96	5.40	29.19
SURVEY # 7825																
3	OCT 17/78	780108	18	20	AGE 0	13	38.38	46	33	4.31	18.54	0.62	1.00	0.43	0.19	0.04
					AGE 2+	1	165.00	165	165	0.00	0.00	48.48	48.48	48.48	0.00	0.00
2	OCT 17/78	780109	20	20	AGE 0	16	35.56	42	28	4.92	24.25	0.48	0.74	0.22	0.17	0.03
					CYPRINID	1	56.00	56	56	0.00	0.00	2.08	2.08	2.08	0.00	0.00
					OTHER	1	762.00	762	762	0.00	0.00					
1	OCT 18/78	780110	24	20	AGE 0	8	30.75	38	25	4.09	16.69	0.36	0.68	0.18	0.15	0.02

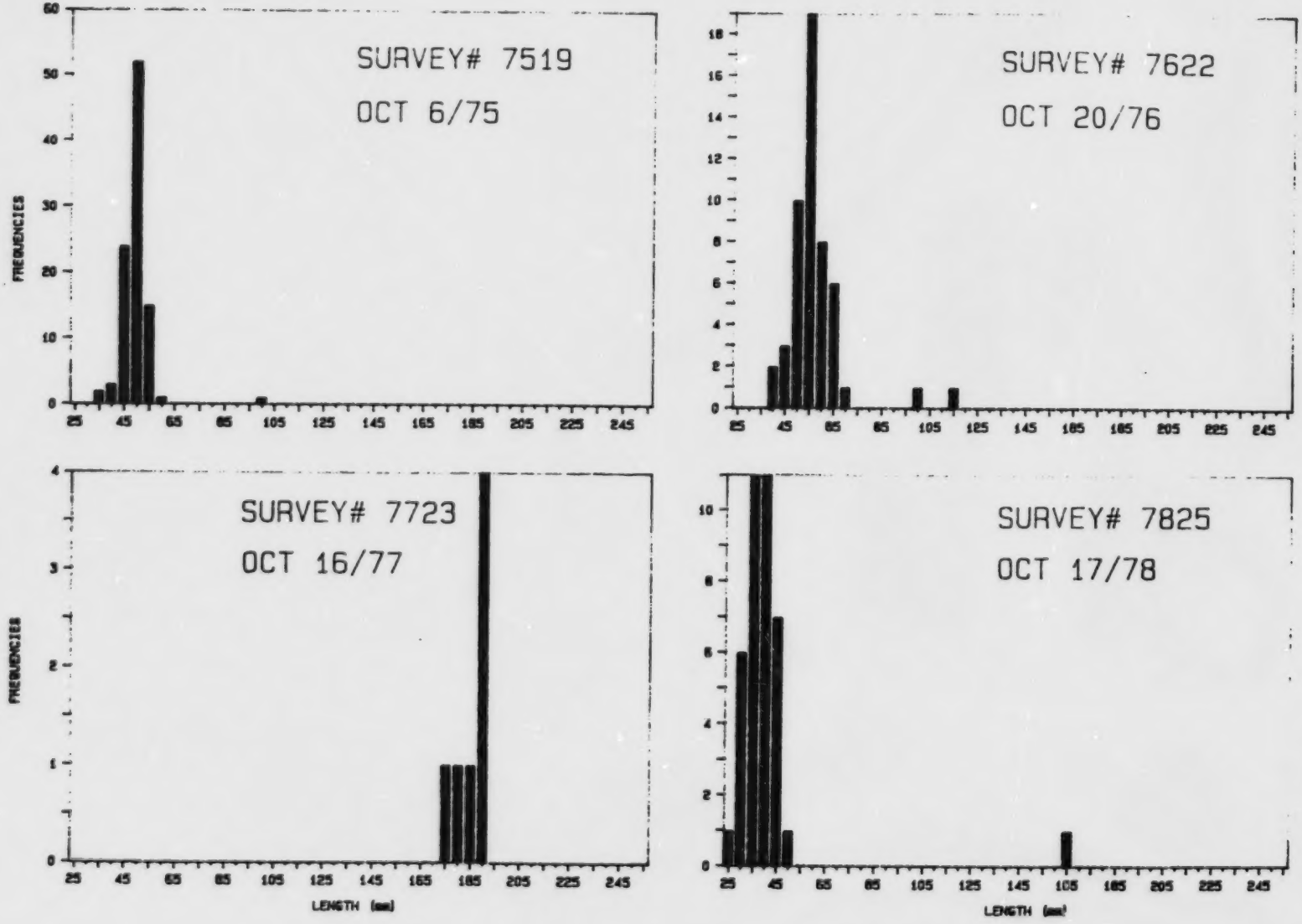


Fig. 15. Sockeye (O. nerka) length frequencies in Adams Lake.

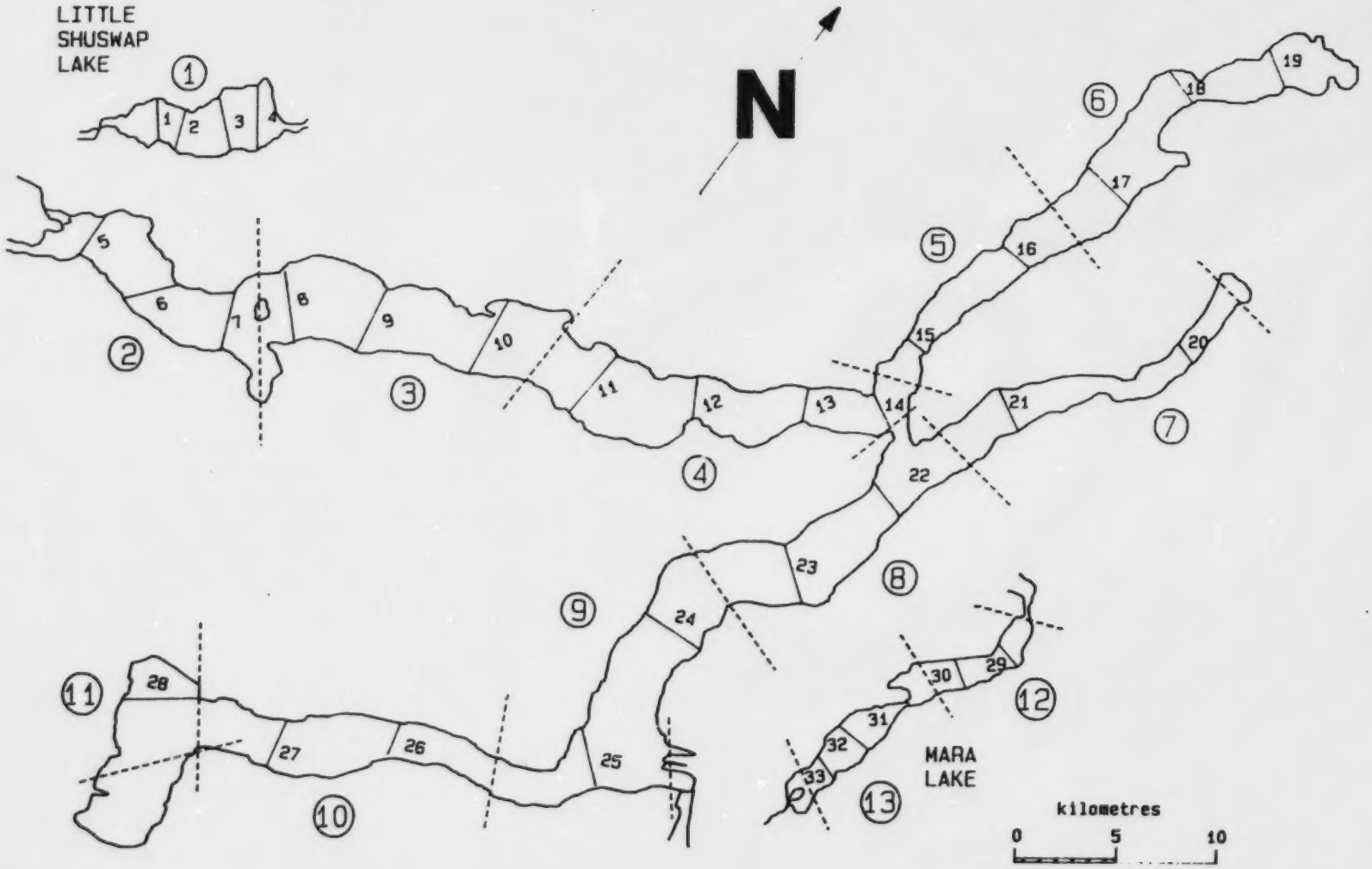


Fig. 16. Map of Shuswap Lake showing areas and transects.

Table 9a - Tow summary for Shuswap Lake

SURVEY #	SAMPLE DATE	TOW	AREA	SAMPLE TIME	DURATION (min)	DEPTH (m)	SKY CODE	LIGHT CODE	WIND DIR	SURFACE TEMP (C)	CATCH
7508	JUL 30/75	750021	5			14					86 AGE 0
	JUL 31/75	750022	7			17					100 AGE 0
	JUL 31/75	750023	1								349 AGE 0
	JUL 31/75	750024	2			14					435 AGE 0
	AUG 1/75	750025	10			15					55 AGE 0
											1 AGE 1
	AUG 1/75	750026	12			20					300 AGE 0
7518	OCT 7/75	750049	1		15	20					100 AGE 0
	OCT 7/75	750050	5		10	20					100 AGE 0
	OCT 7/75	750051	7		30	20					100 AGE 0
	OCT 7/75	750052	2		10	22					100 AGE 0
	OCT 8/75	750053	10		20	21					98 AGE 0
	OCT 9/75	750054	12		20	36					100 AGE 0
7603	APR 8/76	760005	1	02:00	30	15					112 AGE 1
	APR 10/76	760006	2	02:00	20	35					33 AGE 1
											2 OTHER
	APR 13/76	760007	10	21:20	20	40					3 AGE 0
											18 AGE 1
	APR 14/76	760008	11	02:00	40	29					1 AGE 0
											126 AGE 1
	APR 14/76	760009	13	23:30	25	19					6 AGE 0
											11 AGE 1
7605	JUN 15/76	760011	13	02:00		10					197 AGE 0
											4 AGE 1
	JUN 16/76	760012	11	02:30	40	18					4 AGE 0
											16 AGE 1
7609	AUG 8/76	760017	1		12	22					243 AGE 0
	AUG 8/76	760018	12		10	22					268 AGE 0
											2 AGE 1
											2 OTHER
	AUG 8/76	760019	2		20	16					107 AGE 0
	AUG 10/76	760020	6		30	17					32 AGE 0
	AUG 11/76	760021	6		30	21					5 AGE 0
	AUG 11/76	760022	6		15	17					164 AGE 0
	AUG 11/76	760023	7		30	40					5 AGE 0
	AUG 11/76	760024	9		30	16					84 AGE 0
	AUG 11/76	760025	11		15	17					189 AGE 0
											1 AGE 1
7621	OCT 14/76	760049	1		20	20					124 AGE 0
	OCT 15/76	760050	3		20	22					59 AGE 0
	OCT 16/76	760051	6		30	25					25 AGE 0
	OCT 18/76	760052	8		60	25					25 AGE 0
											4 AGE 1

Table 9a - Tow summary for Shuswap Lake

SURVEY #	SAMPLE DATE	TOW	AREA	SAMPLE TIME	DURATION (min)	DEPTH (m)	SKY CODE	LIGHT CODE	WIND DIR	SURFACE TEMP (C)	CATCH
	OCT 18/76	760053	11		40	20					50 AGE 0
											1 AGE 1
	OCT 19/76	760054	13		15	25					337 AGE 0
											1 AGE 1
											1 WHITEFISH
7624	NOV 26/76	760058	1		20	25					22 AGE 0
	NOV 26/76	760059	2		30	27					176 AGE 0
	NOV 27/76	760060	11		45	30					104 AGE 0
											2 AGE 1
	NOV 27/76	760061	11		35	46					18 AGE 0
	NOV 28/76	760062	6		30	30					13 AGE 0
											6 AGE 1
	NOV 28/76	760063	8		45	32					11 AGE 0
											5 AGE 1
											1 AGE 2+
	NOV 29/76	760064	8		30	31					8 AGE 0
	NOV 29/76	760065	5		40	35					2 AGE 1
	NOV 30/76	760066	12		40	25					148 AGE 0
	NOV 30/76	760067	12		10	37					54 AGE 0
											21 AGE 1
7702	MAR 7/77	770005	2		40	24					181 AGE 1
	MAR 9/77	770006	8			25					7 AGE 1
											9 AGE 2+
	MAR 10/77	770007	8		40	40					5 AGE 1
											11 AGE 2+
	MAR 10/77	770008	10		60	37					58 AGE 1
	MAR 10/77	770009	12		40	37					31 AGE 1
											46 AGE 2+
7710	JUL 19/77	770020	1		12	25					32 AGE 0
											1 AGE 1
	JUL 20/77	770021	1		40	23					16 AGE 0
											23 AGE 1
	JUL 20/77	770022	6		40	15					10 AGE 0
											1 AGE 2+
	JUL 20/77	770023	8	00:27	20	14					5 AGE 0
											1 AGE 1
	JUL 20/77	770024	7	22:35	30	27					1 AGE 1
	JUL 21/77	770025	2		45	11					15 AGE 0
	JUL 21/77	770026	13	22:55	30	21					39 AGE 0
											29 AGE 1
7722	OCT 13/77	770057	1		30	22					6 AGE 0
											1 CYPRIND
											10 SCULPIN
	OCT 13/77	770058	2		5	20					55 AGE 0
	OCT 13/77	770059	4	02:07	50	32					3 AGE 0
	OCT 14/77	770060	9	01:10	50	35					1 AGE 0

Table 9a - Tow summary for Shuswap Lake

SURVEY #	SAMPLE DATE	TOW	AREA	SAMPLE TIME	DURATION (min)	DEPTH (m)	SKY CODE	LIGHT CODE	WIND DIR	SURFACE TEMP (C)	CATCH
	OCT 14/77	770061	6		45	30					1 AGE 0
											1 CYPRIND
											1 WHITEFISH
	OCT 15/77	770062	11	23:30	40	28					8 AGE 0
											2 AGE 1
											1 WHITEFISH
	OCT 15/77	770063	12		15	27					62 AGE 0
											3 AGE 1
											1 OTHER
											1 WHITEFISH
	OCT 15/77	770064	12		30	29					30 AGE 0
7810	JUL 11/78	780041	1	21:54	5	7		1	4 0	15.0	10 AGE 0
											1 OTHER
	JUL 12/78	780042	1	00:09	10	20		1	3 0	15.0	16 AGE 0
											4 AGE 1
	JUL 12/78	780043	2	02:37	20	9		3	3 0		30 AGE 0
	JUL 12/78	780044	6	21:37	20	14		1	4 0		90 AGE 0
											1 AGE 1
											2 AGE 2+
	JUL 13/78	780045	5	00:01	20	20		1	4 0		3 AGE 0
											1 AGE 1
	JUL 13/78	780046	7	02:45	20	8		2	0 0		1 AGE 2+
	JUL 13/78	780047	13	21:56	5	19		2	4 0		129 AGE 0
	JUL 13/78	780048	12	22:58	10	18		2	4 0		94 AGE 0
											1 AGE 2+
	JUL 14/78	780049	10	01:12	20	20		2	4 0		8 AGE 0
											1 OTHER
	JUL 14/78	780050	11	02:50	10	17		1	0 0		57 AGE 0
											1 AGE 1
											2 AGE 2+
											1 OTHER
											2 SCULPIN
	JUL 14/78	780051	9	21:34	20	18	1	5	0		
											3 AGE 0
											1 AGE 2+
	JUL 14/78	780052	8	22:52	20	10		1	5 8		30 AGE 0
											1 AGE 1
											2 AGE 2+
	JUL 15/78	780053	4	01:00	15	10		1	4 0		7 AGE 0
											1 AGE 1
	JUL 15/78	780054	3	22:13	15	7		3	3 1		7 AGE 0
	JUL 15/78	780055	3	22:48	10	14		3	3 1		365 AGE 0
7826	OCT 18/78	780111	1	19:35	15	28		3	3 0	12.0	1 AGE 0
											4 SCULPIN
	OCT 18/78	780112	2	21:52	20	24		3	3 0	12.5	6 AGE 0
											6 WHITEFISH

Table 9a - Tow summary for Shuswap Lake

SURVEY #	SAMPLE DATE	TOW	AREA	SAMPLE TIME	DURATION (min)	DEPTH (m)	SKY CODE	LIGHT CODE	WIND DIR	SURFACE TEMP (C)	CATCH
	OCT 19/78	780113	6	19:05	20	18		3	3 0	11.5	1 AGE 0
	OCT 19/78	780114	7	22:20	20	44		3	3 0	12.5	NONE
	OCT 20/78	780115	8	00:10	20	24		3	3 0	12.5	15 AGE 0
	OCT 20/78	780116	9	01:30	20	24		3	3 3	12.5	9 AGE 0
	OCT 20/78	780117	10	03:25	20	28		3	3 0	12.0	18 AGE 0
											1 AGE 1
	OCT 20/78	780118	11	05:10	15	28		3	3 1	11.5	49 AGE 0
											1 SCULPIN
	OCT 21/78	780119	12	01:35	10	35		1	4 0	11.5	43 AGE 0
											6 AGE 1
	OCT 21/78	780120	13	02:40	10	28		1	4 0	11.5	34 AGE 0
											1 WHITEFISH
7917	AUG 7/79	790074	1	21:00	5	7		3	3 5	18.5	114 AGE 0
	AUG 7/79	790075	1	23:00	3	30		3	3 0	18.5	218 AGE 0
	AUG 8/79	790076	2	00:35	3	22		3	3 0	20.5	260 AGE 0
	AUG 8/79	790077	3	21:55	2	22		1	5 0	22.0	422 AGE 0
	AUG 8/79	790078	4	23:50	5	15		1	5 0	21.5	50 AGE 0
	AUG 9/79	790079	7	02:20	3	15		1	5 0	22.0	123 AGE 0
	AUG 9/79	790080	6	20:50	5	15		1	3 0	22.5	91 AGE 0
	AUG 9/79	790081	6	22:09	5	15		1	5 0	21.5	159 AGE 0
	AUG 9/79	790082	5	23:10	2	15		1	5 8	21.5	362 AGE 0
	AUG 10/79	790083	8	00:02	3	15		1	5 0	22.5	66 AGE 0
	AUG 10/79	790084	9	01:25	20	44		1	5 0	23.5	104 AGE 0
											1 AGE 1
											1 AGE 2+
	AUG 10/79	790085	9	02:13	2	15		1	5 0	23.5	42 AGE 0
	AUG 10/79	790086	1	20:42	3	15		3	3 0	24.5	381 AGE 0
	AUG 10/79	790087	1	21:10	10	30		3	3 0	24.5	126 AGE 0
											1 AGE 1
											1 OTHER
	AUG 10/79	790088	10	22:37	5	22		3	3 0	23.5	67 AGE 0
											1 AGE 1
											2 CYPRIND
	AUG 11/79	790089	13	00:20	1	15		3	3 0	23.5	123 AGE 0
	AUG 11/79	790090	12	01:25	1	22		3	3 0	24.0	431 AGE 0
											1 AGE 1
											1 AGE 2+
	AUG 11/79	790091	9	02:30	10	12		3	3 0	22.5	179 AGE 0
											2 CYPRIND
											1 SCULPIN
	AUG 11/79	790092	9	03:13	10	10		3	3 0	22.5	108 AGE 0
											1 CYPRIND
	AUG 11/79	790093	2	20:30	1	15		1	3 0	21.0	21 AGE 0
7921	OCT 16/79	790104	2	20:13	2	22		4	3 0	14.5	43 AGE 0
	OCT 18/79	790105	13	18:45	1	15		4	3 0	14.5	43 AGE 0

Table 9a - Tow summary for Shuswap Lake

SURVEY #	SAMPLE DATE	TOW	AREA	SAMPLE TIME	DURATION (min)	DEPTH (m)	SKY CODE	LIGHT CODE	WIND DIR	SURFACE TEMP (C)	CATCH
	OCT 18/79	790106	12	19:30	2	15	4	3	0	14.5	53 AGE 0
	OCT 18/79	790107	10	21:45	3	15	4	3	0	15.0	17 AGE 0
	OCT 18/79	790108	11	22:40	3	30	4	3	0	14.0	162 AGE 0
	OCT 19/79	790109	9	00:40	2	22	4	3	4	14.5	73 AGE 0
	OCT 19/79	790110	8	02:25	2	22	4	3	8	15.0	173 AGE 0
	OCT 19/79	790111	5	04:10	5	22	3	3	0	15.0	53 AGE 0
	OCT 19/79	790112	6	05:50	5	22	3	2	0	15.0	NONE
	OCT 19/79	790113	1	18:55	2	22	3	3	0	13.0	502 AGE 0
	OCT 19/79	790114	3	21:45	1	22	3	3	6	14.0	237 AGE 0
	OCT 20/79	790115	4	20:40	1	22	2	3	0	13.0	137 AGE 0
	OCT 20/79	790116	7	22:10	5	22	2	3	0	13.0	33 AGE 0
8005	APR 9/80	800011	13	20:50	2	15	1	4	0	4.0	165 AGE 1
	APR 9/80	800012	12	21:45	2	15	1	4	0	3.0	28 AGE 1
	APR 10/80	800013	11	00:35	4	22	1	4	0	2.5	54 AGE 1
	APR 10/80	800014	10	02:00	5	22	1	3	0	2.5	34 AGE 1
	APR 10/80	800015	9	03:52	2	7	1	3	0	2.5	197 AGE 1
	APR 10/80	800016	6	21:30	5	15	1	4	0	2.5	26 AGE 1
	APR 10/80	800017	5	23:45	15	30	1	4	0	2.5	21 AGE 1
	APR 11/80	800018	8	01:45	4	7	1	4	0	1.5	128 AGE 1
	APR 11/80	800019	7	03:15	20	22	1	4	0	1.5	4 AGE 0
											15 AGE 1
	APR 11/80	800020	4	20:50	1	7	1	4	0	2.5	1 AGE 0
											107 AGE 1
	APR 11/80	800021	3	23:20	10	44	1	4	0	2.5	66 AGE 1
											5 SCULPIN
											9 WHITEFISH
	APR 12/80	800022	2	02:00	1	7	1	4	0	1.5	111 AGE 1
	APR 12/80	800023	1	21:45	5	7	1	3	0	4.5	1 AGE 0
											91 AGE 1
8014	OCT 15/80	800053	13	18:40	3	22	1	4	0	13.5	59 AGE 0
	OCT 15/80	800054	12	19:45	3	30	1	4	0	13.5	82 AGE 0
											6 AGE 1
	OCT 15/80	800055	11	21:45	5	22	1	4	0	13.5	42 AGE 0
	OCT 15/80	800056	10	22:40	5	22	1	4	0	13.5	20 AGE 0
	OCT 16/80	800057	9	01:05	10	22	2	4	0	13.5	7 AGE 0
	OCT 16/80	800058	8	03:00	20	30	2	4	0	13.5	1 AGE 0
											4 AGE 1
											1 OTHER
	OCT 16/80	800059	7	04:25	20	30	4	4	0	13.5	NONE
	OCT 16/80	800060	6	18:40	15	15	1	3	0	13.5	14 AGE 0
	OCT 16/80	800061	5	20:35	15	22	1	3	0	13.5	37 AGE 0
											1 AGE 1
	OCT 16/80	800062	4	22:50	10	22	1	3	0	13.5	39 AGE 0
											1 AGE 1
	OCT 17/80	800063	3	01:15	3	30	1	3	0	13.5	57 AGE 0
	OCT 17/80	800064	1	19:30	5	37	3	3	0	13.5	89 AGE 0
											66 SCULPIN

Table 9a - Tow summary for Shuswap Lake

SURVEY #	SAMPLE DATE	TOW	AREA	SAMPLE TIME	DURATION (min)	DEPTH (m)	SKY CODE	LIGHT CODE	WIND DIR	SURFACE TEMP (C)	CATCH
											25 WHITEFISH
	OCT 17/80	800065	2	22:00	5	22	3	3	0	13.5	42 AGE 0
8204	JUL 19/82	820010	1	22:16	2	19	3	3	0	16.0	NONE
	JUL 20/82	820011	13	21:16	10	19	3	3	0	16.0	21 AGE 0
											3 AGE 1
											1 WHITEFISH
	JUL 20/82	820012	12	22:25	10	25	3	3	0	16.5	14 AGE 0
											3 AGE 1
	JUL 21/82	820013	10	01:32	10	13	2	3	0	17.0	18 AGE 0
	JUL 21/82	820014	11	03:02	10	13	3	2	5	18.5	211 AGE 0
											1 AGE 1
	JUL 22/82	820015	4	22:22	20	19	2	3	0	16.0	4 AGE 0
											1 AGE 1
	JUL 23/82	820016	3	01:02	10	7	2	3	0	16.5	6 AGE 0
	JUL 23/82	820017	2	03:08	20	7	3	2	0	16.0	8 AGE 0
	JUL 24/82	820018	9	02:25	20	13	2	3	0	16.5	14 AGE 0
8302	OCT 26/83	830004	1	20:15	5	19	3	3	0	10.5	150 AGE 0
	OCT 27/83	830005	2	18:30	5	7	1	4	0	10.5	89 AGE 0
	OCT 27/83	830006	2	19:00	5	19	1	4	0	10.5	44 AGE 0
	OCT 27/83	830007	3	21:00	4	31	1	4	0	10.5	269 AGE 0
	OCT 27/83	830008	4	23:30	2	25	1	4	0	10.5	238 AGE 0
	OCT 27/83	830009	4	23:48	1	37	1	4	0	10.5	229 AGE 0
	OCT 28/83	830010	6	18:00	5	19	1	4	0	10.0	30 AGE 0
											1 AGE 2+
	OCT 28/83	830011	5	20:00	3	19	3	3	0	10.0	22 AGE 0
	OCT 28/83	830012	5	20:15	3	31	3	3	0	10.0	39 AGE 0
	OCT 28/83	830013	8	22:30	2	19	3	3	0	10.0	109 AGE 0
	OCT 28/83	830014	8	23:00	2	31	3	3	0	10.0	64 AGE 0
	OCT 29/83	830015	7	24:00	5	37	3	4	0	10.5	14 AGE 0
											3 AGE 1
	OCT 29/83	830016	7	00:20	5	19	3	4	0	10.5	21 AGE 0
	OCT 29/83	830017	13	18:00	2	25	1	3	0	10.0	142 AGE 0
	OCT 29/83	830018	12	19:20	1	25	1	3	0	10.0	221 AGE 0
	OCT 29/83	830019	12	19:35	1	37	1	3	0	10.0	446 AGE 0
	OCT 29/83	830020	9	22:15	1	19	1	3	1	10.0	202 AGE 0
	OCT 29/83	830021	9	22:30	1	31	1	3	1	10.0	229 AGE 0
											1 AGE 1
	OCT 30/83	830022	10	17:55	1	31	3	3	0	10.0	198 AGE 0
	OCT 30/83	830023	10	18:15	1	19	3	3	0	10.0	199 AGE 0
	OCT 30/83	830024	11	19:15	1	37	3	3	3	10.0	129 AGE 0
	OCT 30/83	830025	11	19:30	1	19	3	3	3	10.0	28 AGE 0
8402	JUL 24/84	840007	1	22:55	1	19	1	3	0	22.5	112 AGE 0
	JUL 25/84	840008	2	00:38	1	19	1	3	0	20.5	496 AGE 0
											4 AGE 1
											1 AGE 2+

Table 9a - Tow summary for Shuswap Lake

SURVEY #	SAMPLE DATE	TOW	AREA	SAMPLE TIME	DURATION (min)	DEPTH (m)	SKY CODE	LIGHT CODE	WIND DIR	SURFACE TEMP (C)	CATCH
	JUL 25/84	840009	6	20:00	5	19		1	3 0	23.5	30 AGE 0
											4 AGE 1
	JUL 25/84	840010	5	23:20	10	19		1	3 0		68 AGE 0
											2 AGE 1
											3 AGE 2+
	JUL 26/84	840011	4	01:30	3	19		1	3 0		173 AGE 0
											2 AGE 1
	JUL 26/84	840012	3	20:57	3	19		1	3 0	23.5	70 AGE 0
											3 AGE 1
	JUL 26/84	840013	3	21:15	10	7		1	3 0	23.5	12 AGE 0
											1 AGE 1
	JUL 27/84	840014	7	01:00	7	19		1	3 0	21.5	36 AGE 0
											3 AGE 1
											2 AGE 2+
	JUL 27/84	840015	8	02:17	10	19		1	3 0	21.5	10 AGE 0
											3 AGE 1
											1 AGE 2+
	JUL 27/84	840016	11	21:04	2	19		1	3 0	24.5	43 AGE 0
											6 AGE 1
	JUL 27/84	840017	10	22:48	5	19		1	3 0	23.5	9 AGE 0
											3 AGE 1
											1 AGE 2+
	JUL 28/84	840018	9	00:07	10	19		1	3 0	23.5	2 AGE 0
											16 AGE 1
8403	NOV 9/84	840019	2	20:22	10	13		1	4 0	7.0	28 AGE 0
	NOV 10/84	840020	3	00:57	15	31		1	4 0	7.5	14 AGE 0
											1 AGE 1
	NOV 10/84	840021	4	03:57	20	37		1	4 1	7.5	28 AGE 0
											1 AGE 1
	NOV 10/84	840022	5	19:10	15	31		7	3 0	8.0	33 AGE 0
											2 AGE 1
	NOV 10/84	840023	6	20:54	20	37		7	3 0	8.0	15 AGE 0
											3 AGE 1
	NOV 10/84	840024	7	23:57	20	43		7	3 0	7.5	5 AGE 0
											14 AGE 1
	NOV 11/84	840025	12	19:22	10	31		7	3 0	7.5	19 AGE 0
											2 AGE 1
	NOV 11/84	840026	13	20:24	10	25		7	3 0	7.0	13 AGE 0
	NOV 11/84	840027	9	22:30	20	37		3	3 0	7.0	23 AGE 0
											5 AGE 1
	NOV 12/84	840028	10	00:03	10	31		3	3 0	7.0	19 AGE 0
											1 AGE 1
	NOV 12/84	840029	11	01:15	10	37		3	3 0	6.5	44 AGE 0
											7 AGE 1
	NOV 12/84	840030	8	03:29	20	37		7	3 0	7.0	40 AGE 0
											11 AGE 1
											1 AGE 2+

Table 9a - Tow summary for Shuswap Lake

SURVEY #	SAMPLE DATE	TOW	AREA	SAMPLE TIME	DURATION (min)	DEPTH (m)	SKY CODE	LIGHT CODE	WIND DIR	SURFACE TEMP (C)	CATCH
8502	SEP 23/85	850006	2	20:42	20	19	5	3	3	14.0	12 AGE 0
	SEP 24/85	850007	2	14:15	20	19	2	1	3		1 AGE 0
	SEP 25/85	850008	13	20:44	10	19	3	4	0	15.0	1 AGE 0
											1 CYPRINID
	SEP 25/85	850009	12	21:52	10	31	3	4	0	15.0	61 AGE 0
											2 AGE 2+
	SEP 25/85	850010	11	23:55	10	25	1	5	0	15.0	4 AGE 0
											3 AGE 1
	SEP 26/85	850011	10	01:17	20	31	1	5	0	15.5	3 AGE 0
											1 AGE 1
	SEP 26/85	850012	9	03:04	20	31	1	3	0	15.0	1 AGE 1
	SEP 26/85	850013	7	19:17	20	37	1	5	0	15.0	1 AGE 1
											11 AGE 2+
	SEP 26/85	850014	8	21:01	20	49	1	5	0	15.5	7 AGE 2+
	SEP 26/85	850015	5	22:00	20	19	1	5	0	15.2	8 AGE 0
	SEP 26/85	850016	4	23:00	20	19	1	5	0	14.5	4 AGE 0
	SEP 26/85	850017	3	23:51	20	37	1	5	0	14.8	1 AGE 0
											1 AGE 1
											1 AGE 2

Table 9b - Trawl statistics by survey for Shuswap Lake

SURVEY#	DATES	CATCH		LENGTH (mm)					WEIGHT (g)				
		SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
7508	JUL 30-AUG 1/75	AGE 0	1325	45.75	64	23	6.85	46.98	1.08	3.04	0.08	0.49	0.24
		AGE 1	1	116.00	116	116	0.00	0.00	15.10	15.10	15.10	0.00	0.00
7518	OCT 7-9/75	AGE 0	598	56.50	82	32	7.70	59.28	1.92	6.36	0.31	0.82	0.67
7603	APR 8-14/76	AGE 0	10	46.10	49	36	3.70	13.69	1.01	1.20	0.59	0.17	0.03
		AGE 1	400	68.25	88	50	6.63	43.89	3.07	5.97	1.15	0.85	0.73
		OTHER	2	86.50	87	86	0.50	0.25	5.74	5.74	5.74	0.00	0.00
7605	JUN 15-16/76	AGE 0	201	34.43	46	29	2.86	8.18	0.42	0.87	0.25	0.09	0.00
		AGE 1	20	71.80	93	55	10.64	113.16	4.03	8.40	1.66	1.91	3.64
7609	AUG 8-11/76	AGE 0	1097	50.76	79	28	9.79	95.80	1.50	4.59	0.15	0.89	0.80
		AGE 1	3	110.33	114	105	3.86	14.89	16.29	18.04	13.13	2.24	5.01
		OTHER	2	93.00	106	80	13.00	169.00	10.06	13.78	6.33	3.72	13.88
7621	OCT 14-19/76	AGE 0	620	61.76	84	35	10.72	114.87	2.60	6.37	0.41	1.29	1.66
		AGE 1	6	112.50	134	91	15.20	230.92	16.04	26.62	7.37	6.68	44.64
7624	NOV 26-30/76	AGE 0	554	65.93	94	37	10.05	100.96	3.12	8.81	0.46	1.38	1.90
		AGE 1	36	117.14	147	101	10.50	110.23	18.01	40.99	11.06	5.83	33.98
		AGE 2+	1	210.00	210	210	0.00	0.00	106.90	106.90	106.90	0.00	0.00
7702	MAR 7-10/77	AGE 1	282	70.06	100	43	8.38	70.19	3.31	7.52	0.83	1.08	1.16
		AGE 2+	66	120.77	211	75	17.82	317.72	17.47	95.57	3.63	11.36	128.94
7710	JUL 19-20/77	AGE 0	117	48.42	68	30	8.85	78.35	1.34	3.49	0.30	0.82	0.67
		AGE 1	56	104.64	196	40	21.89	479.23	15.32	79.53	1.10	10.50	110.16
		AGE 2+	1	196.00	196	196	0.00	0.00	79.53	79.53	79.53	0.00	0.00
7722	OCT 12-15/77	AGE 0	166	64.48	88	44	9.08	82.38	2.91	7.56	0.73	1.36	1.86
		AGE 1	9	107.44	128	51	29.21	853.14	19.44	44.71	1.39	12.07	145.59
		CYPRINID	2	63.50	73	54	9.50	90.25	2.27	3.73	0.80	1.47	2.15

Table 9b - Trawl statistics by survey for Shuswap Lake

SURVEY#	DATES	CATCH		LENGTH (mm)					WEIGHT (g)				
		SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
		SCULPIN	10	37.50	42	37	1.50	2.25	0.50	0.81	0.32	0.18	0.03
		WHITEFISH	3	100.67	128	75	21.67	469.56	12.81	23.12	4.73	7.67	58.85
7810	JUL 11-15/78	AGE 0	849	47.68	79	24	6.39	40.82	1.30	7.04	0.15	0.53	0.29
		AGE 1	9	79.67	88	65	7.30	53.33	6.66	9.09	2.50	2.05	4.21
		AGE 2+	9	225.56	255	173	32.07	1028.48	87.14	115.79	63.08	21.76	473.62
		SCULPIN	2	21.00	25	17	4.00	16.00	0.14	0.20	0.08	0.06	0.00
7826	OCT 18-21/78	AGE 0	176	65.22	83	34	9.53	90.81	2.95	6.72	0.59	1.19	1.41
		AGE 1	7	146.86	175	127	14.71	216.41	41.39	102.76	19.44	25.98	674.87
		SCULPIN	5	30.60	42	25	6.34	40.24	0.35	0.77	0.18	0.22	0.05
		WHITEFISH	7	48.00	72	36	11.45	131.14	1.28	3.58	0.44	1.02	1.04
7917	AUG 7-11/79	AGE 0	3637	47.66	74	23	7.80	60.77	1.28	30.20	0.18	1.27	1.61
		AGE 1	4	133.75	142	112	12.58	158.19	28.39	34.02	15.14	7.69	59.09
		AGE 2+	2	227.50	245	210	17.50	306.25	160.52	209.77	111.28	49.24	2424.58
		CYPRINID	5	17.20	22	15	2.64	6.96	0.05	0.15	0.01	0.05	0.00
		OTHER	1	27.00	27	27	0.00	0.00	0.14	0.14	0.14	0.00	0.00
		SCULPIN	1	15.00	15	15	0.00	0.00	0.02	0.02	0.02	0.00	0.00
7921	OCT 16-20/79	AGE 0	1526	56.01	80	34	7.33	53.74	1.79	5.51	0.31	0.70	0.49
8005	APR 9-12/80	AGE 0	6	26.17	29	24	1.57	2.47	0.19	0.22	0.13	0.03	0.00
		AGE 1	1043	62.74	88	39	7.09	50.24	2.54	8.61	0.26	0.88	0.77
		SCULPIN	5	31.40	42	25	7.86	61.84	0.40	0.82	0.16	0.27	0.07
		WHITEFISH	9	78.33	97	62	10.73	115.11	4.50	9.23	2.37	2.05	4.21
8014	OCT 15-17/80	AGE 0	489	60.88	93	37	8.24	67.94	2.43	8.43	0.37	1.00	0.99
		AGE 1	12	93.83	120	65	13.23	175.14	9.21	18.85	2.79	4.03	16.22
		OTHER	1	23.00	23	23	0.00	0.00	0.17	0.17	0.17	0.00	0.00
		SCULPIN	66	31.48	51	19	9.15	83.73	0.54	2.32	0.07	0.56	0.31
		WHITEFISH	26	99.96	136	53	21.25	451.65	12.93	30.68	1.50	7.03	49.44

Table 9b - Trawl statistics by survey for Shuswap Lake

SURVEY#	DATES	CATCH		LENGTH (mm)					WEIGHT (g)				
		SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
8204	JUL 19-24/82	AGE 0	296	46.39	65	31	6.14	37.70	1.04	2.32	0.28	0.40	0.16
		AGE 1	8	105.50	128	90	11.49	132.00	16.94	23.11	14.92	3.12	9.74
		SCULPIN	5	27.60	43	20	8.11	65.84	0.34	1.27	0.06	0.47	0.22
8302	OCT 26-30/83	AGE 0	3112	56.74	89	32	8.29	68.77	2.00	7.29	0.34	0.86	0.74
		AGE 1	4	117.50	145	63	31.99	1.02E3	23.24	36.26	2.29	12.65	160.07
		AGE 2+	1	195.00	195	195	0.00	0.00	80.76	80.76	80.76	0.00	0.00
8402	JUL 24-28/84	AGE 0	1061	48.98	86	30	6.40	40.93	1.44	7.54	0.22	0.59	0.35
		AGE 1	47	93.47	115	72	10.25	105.06	9.77	19.04	1.79	3.84	14.72
		AGE 2+	8	176.75	189	165	8.35	69.69	77.60	112.37	59.23	15.64	244.61
8403	NOV 9-12/84	AGE 0	281	67.95	88	45	6.37	40.59	3.56	7.83	0.42	1.03	1.05
		AGE 1	47	103.23	135	62	16.37	268.01	13.07	27.98	3.02	5.29	27.94
		AGE 2+	1	134.00	134	134	0.00	0.00	26.38	26.38	26.38	0.00	0.00
8502	SEP 23-26/85	AGE 0	95	56.64	74	31	7.00	49.05	2.02	4.44	0.42	0.75	0.56
		AGE 1	7	135.29	164	101	24.59	604.49	32.07	51.40	10.31	16.02	256.75
		AGE 2+	21	189.52	212	172	10.31	106.25	86.64	126.25	64.47	14.82	219.62

Table 9c - Trawl statistics by tow for Shuswap Lake

AREA	DATE	TOW	TRAWL DEPTH (m)	TRAWL DURATION (min)	CATCH SPECIES	CATCH N	LENGTH (mm) MEAN	LENGTH (mm) MAX	LENGTH (mm) MIN	LENGTH (mm) S.D.	LENGTH (mm) VAR	WEIGHT (g) MEAN	WEIGHT (g) MAX	WEIGHT (g) MIN	WEIGHT (g) S.D.	WEIGHT (g) VAR
SURVEY # 7508																
5	JUL 30/75	750021	14		AGE 0	86	46.51	60	33	6.17	38.06	1.19	2.57	0.41	0.47	0.22
7	JUL 31/75	750022	17		AGE 0	100	49.72	60	33	5.46	29.80	1.40	2.40	0.36	0.46	0.22
1	JUL 31/75	750023			AGE 0	349	47.45	59	35	4.78	22.90	1.15	2.40	0.39	0.36	0.13
2	JUL 31/75	750024	14		AGE 0	435	46.45	60	30	4.95	24.51	1.06	2.40	0.30	0.33	0.11
10	AUG 1/75	750025	15		AGE 0	55	51.44	62	33	5.00	25.01	1.64	2.83	0.39	0.45	0.20
					AGE 1	1	116.00	116	116	0.00	0.00	15.10	15.10	15.10	0.00	0.00
12	AUG 1/75	750026	20		AGE 0	300	40.17	64	23	8.57	73.38	0.79	3.04	0.08	0.62	0.38
SURVEY # 7518																
1	OCT 7/75	750049	20	15	AGE 0	100	53.38	67	43	4.77	22.74	1.54	3.07	0.74	0.47	0.22
5	OCT 7/75	750050	20	10	AGE 0	100	57.98	72	44	5.70	32.50	1.99	3.77	0.86	0.57	0.33
7	OCT 7/75	750051	20	30	AGE 0	100	57.59	72	39	5.49	30.14	2.03	3.90	0.69	0.57	0.32
2	OCT 7/75	750052	22	10	AGE 0	100	57.93	69	40	4.80	23.03	1.99	3.10	0.60	0.44	0.20
10	OCT 8/75	750053	21	20	AGE 0	98	63.15	82	44	7.70	59.23	2.73	6.36	0.87	1.14	1.29
12	OCT 9/75	750054	36	20	AGE 0	100	49.10	68	32	8.65	74.77	1.30	3.45	0.31	0.70	0.49
SURVEY # 7603																
1	APR 8/76	760005	15	30	AGE 1	112	65.70	83	53	5.44	29.57	2.80	5.12	1.56	0.69	0.48
2	APR 10/76	760006	35	20	AGE 1	33	65.15	73	58	3.95	15.58	2.48	3.46	1.39	0.48	0.23
					OTHER	2	86.50	87	86	0.50	0.25	5.74	5.74	5.74	0.00	0.00
10	APR 13/76	760007	40	20	AGE 0	3	42.67	46	36	4.71	22.22	0.89	1.10	0.59	0.22	0.05
					AGE 1	18	58.89	67	50	5.07	25.65	2.11	3.24	1.32	0.56	0.32
11	APR 14/76	760008	29	40	AGE 0	1	49.00	49	49	0.00	0.00	0.92	0.92	0.92	0.00	0.00
					AGE 1	126	71.79	88	55	5.39	29.02	3.44	5.97	1.51	0.77	0.59
13	APR 14/76	760009	19	25	AGE 0	6	47.33	49	44	1.70	2.89	1.08	1.20	0.87	0.11	0.01
					AGE 1	111	69.24	84	51	6.91	47.72	3.25	5.42	1.15	0.91	0.84

Table 9c - Trawl statistics by tow for Shuswap Lake

TRAWL					CATCH		LENGTH (mm)					WEIGHT (g)				
AREA	DATE	TOW	DEPTH (m)	DURATION (min)	SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
SURVEY # 7605																
13	JUN 15/76	760011	10		AGE 0	37	34.47	46	29	2.88	8.27	0.42	0.87	0.25	0.09	0.00
					AGE 1	4	63.25	67	59	3.03	9.19	2.60	3.44	1.92	0.55	0.30
11	JUN 16/76	760012	18	40	AGE 0	4	32.75	34	32	0.83	0.69	0.39	0.48	0.34	0.05	0.00
					AGE 1	16	73.94	93	55	10.78	116.31	4.38	8.40	1.66	1.96	3.83
SURVEY # 7609																
1	AUG 8/76	760017	22	12	AGE 0	243	58.06	72	44	4.68	21.94	2.08	3.95	0.81	0.55	0.30
12	AUG 8/76	760018	22	10	AGE 0	268	42.04	66	30	6.67	44.54	0.81	2.96	0.21	0.46	0.22
					AGE 1	2	108.50	112	105	3.50	12.25	15.41	17.70	13.13	2.29	5.22
					OTHER	2	93.00	106	80	13.00	169.00	10.06	13.78	6.33	3.72	13.88
2	AUG 8/76	760019	16	20	AGE 0	107	56.76	73	41	6.01	36.09	1.87	3.56	0.70	0.58	0.34
6	AUG 10/76	760020	17	30	AGE 0	32	47.72	59	28	6.29	39.51	1.16	2.24	0.15	0.47	0.22
6	AUG 11/76	760021	21	30	AGE 0	5	52.60	61	46	4.84	23.44	1.46	2.21	0.91	0.42	0.18
6	AUG 11/76	760022	17	15	AGE 0	164	61.07	74	39	6.87	47.18	2.57	4.59	0.56	0.90	0.80
7	AUG 11/76	760023	40	30	AGE 0	5	52.80	79	39	14.43	208.16	1.64	4.32	0.46	1.40	1.97
9	AUG 11/76	760024	16	30	AGE 0	84	43.85	74	32	6.40	41.01	0.90	4.27	0.32	0.53	0.28
11	AUG 11/76	760025	17	15	AGE 0	189	44.87	62	34	5.04	25.43	0.92	2.29	0.38	0.35	0.12
					AGE 1	1	114.00	114	114	0.00	0.00	18.04	18.04	18.04	0.00	0.00
SURVEY # 7621																
1	OCT 14/76	760049	20	20	AGE 0	124	70.54	81	60	4.25	18.02	3.63	5.61	2.17	0.73	0.53
3	OCT 15/76	760050	22	20	AGE 0	59	68.81	81	46	7.86	61.81	3.51	5.95	1.00	1.11	1.23
6	OCT 16/76	760051	25	30	AGE 0	25	75.40	84	60	4.87	23.76	4.69	6.37	2.12	0.91	0.82
8	OCT 18/76	760052	25	60	AGE 0	25	58.68	75	45	8.40	70.62	2.21	4.60	0.98	1.06	1.12
					AGE 1	4	120.00	134	102	12.51	156.50	19.11	26.62	10.82	5.96	35.49
11	OCT 18/76	760053	20	40	AGE 0	50	60.68	81	43	9.05	81.86	2.55	5.45	0.84	1.15	1.33
					AGE 1	1	104.00	104	104	0.00	0.00	12.42	12.42	12.42	0.00	0.00

Table 9c - Trawl statistics by tow for Shuswap Lake

TRAWL					CATCH		LENGTH (mm)					WEIGHT (g)				
AREA	DATE	TOW	DEPTH (m)	DURATION (min)	SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
13	OCT 19/76	760054	25	15	AGE 0	337	56.68	80	35	9.86	97.17	1.94	6.24	0.41	1.00	1.01
					AGE 1	1	91.00	91	91	0.00	0.00	7.37	7.37	7.37	0.00	0.00
					WHITEFISH	1	129.00	129	129	0.00	0.00	24.43	24.43	24.43	0.00	0.00
SURVEY # 7624																
1	NOV 26/76	760058	25	20	AGE 0	22	73.36	78	66	3.51	12.32	4.14	5.04	2.85	0.60	0.36
2	NOV 26/76	760059	27	30	AGE 0	176	69.12	81	50	5.77	33.34	3.38	5.64	1.08	0.82	0.67
11	NOV 27/76	760060	30	45	AGE 0	104	70.36	93	52	8.10	65.59	3.89	8.24	1.50	1.48	2.20
					AGE 1	2	141.00	147	135	6.00	36.00	35.19	40.99	29.40	5.80	33.58
11	NOV 27/76	760061	46	35	AGE 0	18	66.17	83	44	11.49	132.03	3.36	6.86	0.90	1.68	2.84
6	NOV 28/76	760062	30	30	AGE 0	13	76.46	85	59	7.03	49.48	4.75	6.44	2.04	1.17	1.36
					AGE 1	6	122.33	128	111	6.21	38.56	19.57	22.45	14.00	3.13	9.78
8	NOV 28/76	760063	32	45	AGE 0	11	70.64	81	51	7.61	57.87	3.56	5.22	1.57	1.01	1.01
					AGE 1	5	120.80	135	105	9.93	98.56	17.35	21.95	12.07	3.42	11.68
					AGE 2+	1	210.00	210	210	0.00	0.00	106.90	106.90	106.90	0.00	0.00
8	NOV 29/76	760064	31	30	AGE 0	8	68.25	80	55	8.03	64.44	3.44	5.88	1.71	1.30	1.70
5	NOV 29/76	760065	35	40	AGE 1	2	122.50	136	109	13.50	182.25	22.16	29.76	14.55	7.61	57.84
12	NOV 30/76	760066	25	40	AGE 0	148	58.03	82	37	9.71	94.31	2.06	5.67	0.50	0.97	0.95
12	NOV 30/76	760067	37	10	AGE 0	54	61.70	94	39	12.06	145.54	2.62	8.81	0.46	1.67	2.78
					AGE 1	21	112.00	123	101	6.28	39.43	15.70	21.07	11.06	2.84	8.07
SURVEY # 7702																
2	MAR 7/77	770005	24	40	AGE 1	181	72.27	85	54	5.58	31.10	3.61	5.42	1.39	0.75	0.57
8	MAR 9/77	770006	25		AGE 1	7	71.57	85	58	8.67	75.10	3.47	5.90	1.81	1.25	1.57
					AGE 2+	9	130.56	144	118	8.68	75.36	20.95	29.29	11.59	5.09	25.94
8	MAR 10/77	770007	40	40	AGE 1	5	66.20	73	59	4.62	21.36	2.76	3.16	1.88	0.50	0.25
					AGE 2+	11	141.27	211	113	24.16	583.65	29.85	95.57	15.31	21.30	453.51
10	MAR 10/77	770008	37	60	AGE 1	58	68.60	88	46	8.85	78.34	3.00	6.40	0.98	1.24	1.54
12	MAR 10/77	770009	37	40	AGE 1	31	60.13	100	43	12.48	155.85	2.15	7.52	0.83	1.38	1.89
					AGE 2+	46	113.96	144	75	11.66	135.87	13.87	28.92	3.63	4.55	20.70
SURVEY # 7710																

Table 9c - Trawl statistics by tow for Shuswap Lake

TRAWL					CATCH		LENGTH (mm)					WEIGHT (g)				
AREA	DATE	TOW	DEPTH (m)	DURATION (min)	SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
1	JUL 19/77	770020	25	12	AGE 0	32	58.63	68	46	5.36	28.73	2.32	3.49	1.12	0.61	0.37
					AGE 1	1	76.00	76	76	0.00	0.00	4.83	4.83	4.83	0.00	0.00
1	JUL 20/77	770021	23	40	AGE 0	16	46.69	57	37	5.90	34.84	1.01	1.58	0.46	0.36	0.13
					AGE 1	23	107.09	138	47	20.47	418.95	16.12	31.79	1.10	7.04	49.63
6	JUL 20/77	770022	15	40	AGE 0	10	42.80	63	35	7.39	54.56	0.93	2.87	0.46	0.67	0.45
					AGE 2+	1	196.00	196	196	0.00	0.00	79.53	79.53	79.53	0.00	0.00
8	JUL 20/77	770023	14	20	AGE 0	5	42.00	52	35	6.69	44.80	0.89	1.59	0.43	0.44	0.20
					AGE 1	1	96.00	96	96	0.00	0.00	8.71	8.71	8.71	0.00	0.00
7	JUL 20/77	770024	27	30	AGE 1	1	109.00	109	109	0.00	0.00	15.79	15.79	15.79	0.00	0.00
2	JUL 21/77	770025	11	45	AGE 0	15	46.13	57	37	5.73	32.78	1.08	2.08	0.57	0.42	0.18
13	JUL 21/77	770026	21	30	AGE 0	39	43.90	64	30	6.50	42.30	0.94	3.25	0.30	0.59	0.35
					AGE 1	29	100.69	119	40	15.92	253.46	13.04	20.79	5.09	4.49	20.20
SURVEY # 7722																
1	OCT 13/77	770057	22	30	AGE 0	6	84.00	88	77	3.96	15.67	6.92	7.56	5.27	0.80	0.63
					CYPRINID	1	54.00	54	54	0.00	0.00	0.80	0.80	0.80	0.00	0.00
					SCULPIN	10	37.50	42	37	1.50	2.25	0.50	0.81	0.32	0.18	0.03
2	OCT 13/77	770058	20	5	AGE 0	55	69.65	80	53	5.38	28.95	3.72	6.02	1.67	0.79	0.62
4	OCT 13/77	770059	32	50	AGE 0	3	70.33	73	66	3.09	9.56	3.51	3.69	3.19	0.23	0.05
9	OCT 14/77	770060	35	50	AGE 0	1	57.00	57	57	0.00	0.00	1.75	1.75	1.75	0.00	0.00
6	OCT 14/77	770061	30	45	AGE 0	1	76.00	76	76	0.00	0.00	4.17	4.17	4.17	0.00	0.00
					CYPRINID	1	73.00	73	73	0.00	0.00	3.73	3.73	3.73	0.00	0.00
					WHITEFISH	1	75.00	75	75	0.00	0.00	4.73	4.73	4.73	0.00	0.00
11	OCT 15/77	770062	28	40	AGE 0	8	70.25	83	56	8.06	64.94	3.65	5.12	1.63	1.16	1.35
					AGE 1	2	122.50	125	120	2.50	6.25	32.26	44.71	19.82	12.44	154.88
					WHITEFISH	1	99.00	99	99	0.00	0.00	10.58	10.58	10.58	0.00	0.00

Table 9c - Trawl statistics by tow for Shuswap Lake

TRAWL					CATCH		LENGTH (mm)					WEIGHT (g)				
AREA	DATE	TOW	DEPTH (m)	DURATION (min)	SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
12	OCT 15/77	770063	27	15	AGE 0	62	57.87	74	46	6.51	42.40	1.87	4.27	0.73	0.70	0.50
					AGE 1	3	122.00	123	120	1.41	2.00	21.79	24.84	19.59	2.22	4.95
					OTHER	1	147.00	147	147	0.00	0.00	41.29	41.29	41.29	0.00	0.00
					WHITEFISH	1	128.00	128	128	0.00	0.00	23.12	23.12	23.12	0.00	0.00
12	OCT 15/77	770064	29	30	AGE 0	30	62.50	73	44	7.46	55.65	2.51	3.77	0.93	0.74	0.55
					AGE 1	4	89.00	128	51	36.09	1302.50	11.26	21.30	1.39	9.65	93.13
SURVEY # 7810																
1	JUL 11/78	780041	7	5	AGE 0	10	49.40	57	42	3.69	13.64	1.41	2.10	0.83	0.34	0.11
					OTHER	1	76.00	76	76	0.00	0.00	5.39	5.39	5.39	0.00	0.00
1	JUL 12/78	780042	20	10	AGE 0	16	50.19	63	42	4.85	23.53	1.59	3.02	0.94	0.49	0.24
					AGE 1	4	83.25	88	81	2.77	7.69	7.85	9.09	7.15	0.74	0.55
2	JUL 12/78	780043	9	20	AGE 0	30	43.40	54	36	4.80	23.04	0.99	1.66	0.54	0.31	0.09
6	JUL 12/78	780044	14	20	AGE 0	90	50.28	65	36	5.18	26.80	1.51	3.24	0.52	0.46	0.21
					AGE 1	1	87.00	87	87	0.00	0.00	8.06	8.06	8.06	0.00	0.00
					AGE 2+	2	229.50	255	204	25.50	650.25					
5	JUL 13/78	780045	20	20	AGE 0	3	38.00	42	36	2.83	8.00	0.61	0.82	0.50	0.15	0.02
					AGE 1	1	70.00	70	70	0.00	0.00	4.13	4.13	4.13	0.00	0.00
7	JUL 13/78	780046	8	20	AGE 2+	1	255.00	255	255	0.00	0.00					
13	JUL 13/78	780047	19	5	AGE 0	129	50.33	66	33	6.61	43.76	1.46	3.26	0.39	0.52	0.27
12	JUL 13/78	780048	18	10	AGE 0	94	50.83	71	29	5.55	30.84	1.49	4.06	0.24	0.51	0.26
					AGE 2+	1	255.00	255	255	0.00	0.00					
10	JUL 14/78	780049	20	20	AGE 0	8	49.88	58	32	7.51	56.36	1.22	1.89	0.33	0.43	0.19
					OTHER	1	22.00	22	22	0.00	0.00	0.11	0.11	0.11	0.00	0.00
11	JUL 14/78	780050	17	10	AGE 0	57	43.04	79	31	9.38	88.07	1.07	7.04	0.34	1.15	1.33
					AGE 1	1	77.00	77	77	0.00	0.00	5.47	5.47	5.47	0.00	0.00
					AGE 2+	2	250.00	250	250	0.00	0.00					
					OTHER	1	560.00	560	560	0.00	0.00	0.00	0.00	0.00	0.00	0.00
					SCULPIN	2	21.00	25	17	4.00	16.00	0.14	0.20	0.08	0.06	0.00

Table 9c - Trawl statistics by tow for Shuswap Lake

TRAWL					CATCH		LENGTH (mm)					WEIGHT (g)				
AREA	DATE	TOW	DEPTH (m)	DURATION (min)	SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
9	JUL 14/78	780051	18	20	AGE 0	3	34.00	36	32	1.63	2.67	0.42	0.48	0.38	0.04	0.00
					AGE 2+	1	183.00	183	183	0.00	0.00	82.54	82.54	82.54	0.00	0.00
8	JUL 14/78	780052	10	20	AGE 0	30	38.40	56	25	7.17	51.37	0.65	1.66	0.15	0.35	0.12
					AGE 1	1	65.00	65	65	0.00	0.00	2.50	2.50	2.50	0.00	0.00
8	JUL 14/78	780052	10	20	AGE 2+	2	189.00	205	173	16.00	256.00	89.43	115.79	63.08	26.35	694.59
4	JUL 15/78	780053	10	15	AGE 0	7	39.57	50	36	4.50	20.24	0.75	1.42	0.57	0.28	0.08
					AGE 1	1	85.00	85	85	0.00	0.00	8.39	8.39	8.39	0.00	0.00
3	JUL 15/78	780054	7	15	AGE 0	7	38.86	45	33	3.68	13.55	0.65	1.08	0.38	0.22	0.05
3	JUL 15/78	780055	14	10	AGE 0	365	47.45	62	24	4.18	17.46	1.27	2.67	0.46	0.31	0.09
SURVEY # 7826																
1	OCT 18/78	7	80111	28 15	AGE 0	1	82.00	82	82	0.00	0.00	6.72	6.72	6.72	0.00	0.00
					SCULPIN	4	27.75	33	25	3.11	9.69	0.24	0.36	0.18	0.07	0.00
2	OCT 18/78	780112	24	20	AGE 0	6	73.00	78	60	6.00	36.00	4.34	5.10	2.65	0.80	0.64
					WHITEFISH	6	46.50	72	36	11.72	137.25	1.20	3.58	0.44	1.08	1.16
6	OCT 19/78	780113	18	20	AGE 0	1	66.00	66	66	0.00	0.00	2.36	2.36	2.36	0.00	0.00
7	OCT 19/78	780114	44	20	NO FISH											
8	OCT 20/78	780115	24	20	AGE 0	15	65.07	71	56	4.33	18.73	2.72	4.21	1.68	0.62	0.38
9	OCT 20/78	780116	24	20	AGE 0	9	69.67	83	60	6.11	37.33	3.33	5.60	2.04	1.01	1.01
10	OCT 20/78	780117	28	20	AGE 0	18	65.00	74	58	4.56	20.78	2.76	3.90	1.93	0.58	0.34
					AGE 1	1	175.00	175	175	0.00	0.00	102.76	102.76	102.76	0.00	0.00
11	OCT 20/78	780118	28	15	AGE 0	49	69.73	81	50	6.93	48.03	3.51	5.65	1.83	1.02	1.03
					SCULPIN	1	42.00	42	42	0.00	0.00	0.77	0.77	0.77	0.00	0.00
12	OCT 21/78	780119	35	10	AGE 0	43	64.74	81	34	10.07	101.45	2.90	5.93	0.59	1.09	1.20
					AGE 1	6	142.17	160	127	9.92	98.47	31.16	43.85	19.44	7.42	55.05
13	OCT 21/78	780120	28	10	AGE 0	34	56.41	80	39	10.27	105.54	1.96	4.82	0.59	1.13	1.27
					WHITEFISH	1	57.00	57	57	0.00	0.00	1.81	1.81	1.81	0.00	0.00

Table 9c - Trawl statistics by tow for Shuswap Lake

AREA	DATE	TOW	DEPTH (m)	DURATION (min)	SPECIES	N	LENGTH (mm) MEAN	MAX	MIN	S.D.	VAR	WEIGHT (g) MEAN	MAX	MIN	S.D.	VAR
SURVEY # 7917																
1	AUG 7/79	790074	7	5	AGE 0	114	43.95	52	33	3.93	15.42	0.90	1.43	0.35	0.23	0.05
1	AUG 7/79	790075	30	3	AGE 0	218	45.62	60	29	4.84	23.43	0.99	2.00	0.28	0.32	0.10
2	AUG 8/79	790076	22	3	AGE 0	260	54.68	70	32	6.54	42.81	1.78	3.48	0.28	0.58	0.34
3	AUG 8/79	790077	22	2	AGE 0	422	45.36	63	33	5.20	27.08	1.03	2.54	0.35	0.36	0.13
4	AUG 8/79	790078	15	5	AGE 0	50	48.14	59	34	6.00	36.00	1.19	2.20	0.34	0.45	0.21
7	AUG 9/79	790079	15	3	AGE 0	123	51.84	67	23	7.02	49.31	1.55	3.46	0.22	0.54	0.29
6	AUG 9/79	790080	15	5	AGE 0	91	49.63	72	35	6.01	36.17	1.35	4.38	0.41	0.55	0.30
6	AUG 9/79	790081	15	5	AGE 0	159	47.34	64	31	6.16	37.88	1.13	2.52	0.31	0.43	0.19
5	AUG 9/79	790082	15	2	AGE 0	362	45.73	62	30	5.31	28.24	0.98	2.39	0.28	0.34	0.12
8	AUG 10/79	790083	15	3	AGE 0	66	48.77	64	28	8.38	70.27	1.33	2.81	0.26	0.61	0.38
9	AUG 10/79	790084	44	20	AGE 0	104	56.61	71	33	7.15	51.14	2.02	4.04	0.41	0.66	0.44
					AGE 1	1	141.00	141	141	0.00	0.00	32.40	32.40	32.40	0.00	0.00
					AGE 2+	1	245.00	245	245	0.00	0.00	209.77	209.77	209.77	0.00	0.00
9	AUG 10/79	790085	15	2	AGE 0	42	53.02	72	32	10.63	113.07	1.74	4.02	0.31	0.86	0.74
1	AUG 10/79	790086	15	3	AGE 0	381	47.57	70	28	8.05	64.87	1.66	30.20	0.22	3.47	12.04
1	AUG 10/79	790087	30	10	AGE 0	126	48.13	74	30	10.02	100.40	1.34	4.69	0.24	0.94	0.88
					AGE 1	1	142.00	142	142	0.00	0.00	34.02	34.02	34.02	0.00	0.00
					OTHER	1	27.00	27	27	0.00	0.00	0.14	0.14	0.14	0.00	0.00
10	AUG 10/79	790088	22	5	AGE 0	67	53.36	68	35	7.76	60.20	1.77	4.36	0.45	0.78	0.62
					AGE 1	1	140.00	140	140	0.00	0.00	32.00	32.00	32.00	0.00	0.00
					CYPRINID	2	19.00	22	16	3.00	9.00	0.09	0.15	0.04	0.05	0.00
13	AUG 11/79	790089	15	1	AGE 0	123	39.17	60	26	6.80	46.24	0.71	2.20	0.19	0.39	0.15
12	AUG 11/79	790090	22	1	AGE 0	431	46.07	63	29	6.75	45.57	1.13	2.72	0.29	0.48	0.23
					AGE 1	1	112.00	112	112	0.00	0.00	15.14	15.14	15.14	0.00	0.00
					AGE 2+	1	210.00	210	210	0.00	0.00	111.28	111.28	111.28	0.00	0.00
9	AUG 11/79	790091	12	10	AGE 0	179	46.96	65	28	9.09	82.60	1.22	2.83	0.18	0.62	0.38
					CYPRINID	2	15.00	15	15	0.00	0.00	0.02	0.02	0.02	0.00	0.00
					SCULPIN	1	15.00	15	15	0.00	0.00	0.02	0.02	0.02	0.00	0.00
9	AUG 11/79	790092	10	10	AGE 0	108	43.33	65	27	8.39	70.35	1.01	3.23	0.20	0.57	0.32
					CYPRINID	1	18.00	18	18	0.00	0.00	0.04	0.04	0.04	0.00	0.00
2	AUG 11/79	790093	15	1	AGE 0	211	51.16	67	28	7.71	59.42	1.59	3.68	0.26	0.64	0.41
SURVEY # 7921																

Table 9c - Trawl statistics by tow for Shuswap Lake

TRAWL					CATCH		LENGTH (mm)					WEIGHT (g)				
AREA	DATE	TOW	DEPTH (m)	DURATION (min)	SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
2	OCT 16/79	790104	22	2	AGE 0	43	60.40	70	50	4.76	22.61	2.21	3.45	1.36	0.50	0.25
13	OCT 18/79	790105	15	1	AGE 0	43	44.72	64	37	6.10	37.18	0.83	2.49	0.41	0.45	0.21
12	OCT 18/79	790106	15	2	AGE 0	53	47.85	64	34	7.41	54.85	1.08	2.53	0.31	0.53	0.28
10	OCT 18/79	790107	15	3	AGE 0	17	52.76	63	43	5.44	29.59	1.53	2.67	0.92	0.50	0.25
11	OCT 18/79	790108	30	3	AGE 0	162	62.56	80	41	8.96	80.22	2.45	5.51	0.61	1.12	1.26
9	OCT 19/79	790109	22	2	AGE 0	73	59.56	79	41	6.81	46.38	2.05	5.51	0.63	0.78	0.61
8	OCT 19/79	790110	22	2	AGE 0	173	59.87	73	40	6.14	37.64	2.00	3.58	0.64	0.57	0.33
5	OCT 19/79	790111	22	5	AGE 0	53	55.19	65	38	6.24	38.98	1.68	2.63	0.59	0.52	0.27
6	OCT 19/79	790112	22	5	NO FISH											
1	OCT 19/79	790113	22	2	AGE 0	502	53.35	67	41	5.24	27.49	1.65	3.26	0.61	0.49	0.24
3	OCT 19/79	790114	22	1	AGE 0	237	56.71	73	44	5.39	29.10	1.76	3.30	0.77	0.48	0.23
4	OCT 20/79	790115	22	1	AGE 0	137	56.01	71	42	5.46	29.77	1.70	3.36	0.82	0.46	0.22
7	OCT 20/79	790116	22	5	AGE 0	33	56.52	68	36	7.99	63.89	1.88	3.03	0.46	0.64	0.41
SURVEY # 8005																
13	APR 9/80	800011	15	2	AGE 1	165	58.60	74	39	7.89	62.23	1.98	4.00	0.54	0.80	0.64
12	APR 9/80	800012	15	2	AGE 1	28	63.00	74	49	7.05	49.64	2.39	3.80	1.07	0.77	0.60
11	APR 10/80	800013	22	4	AGE 1	54	67.76	88	51	8.34	69.55	3.36	6.99	1.26	1.24	1.55
10	APR 10/80	800014	22	5	AGE 1	34	64.15	74	43	6.14	37.71	2.80	4.29	0.71	0.75	0.56
9	APR 10/80	800015	7	2	AGE 1	197	66.40	81	48	4.86	23.60	2.88	5.10	1.09	0.62	0.38
6	APR 10/80	800016	15	5	AGE 1	26	61.69	77	52	5.52	30.44	2.44	5.41	1.33	0.80	0.63
5	APR 10/80	800017	30	15	AGE 1	21	58.67	69	46	6.07	36.79	2.49	8.61	1.27	1.49	2.22
8	APR 11/80	800018	7	4	AGE 1	128	67.47	86	50	5.50	30.25	3.20	6.00	1.27	0.81	0.66
7	APR 11/80	800019	22	20	AGE 0	4	26.75	29	25	1.48	2.19	0.21	0.22	0.19	0.01	0.00
					AGE 1	15	64.53	80	51	7.51	56.38	3.00	5.29	1.49	1.00	1.00
4	APR 11/80	800020	7	1	AGE 0	1	24.00	24	24	0.00	0.00	0.13	0.13	0.13	0.00	0.00
					AGE 1	107	56.99	69	40	5.11	26.07	2.21	4.22	0.69	0.61	0.37
3	APR 11/80	800021	44	10	AGE 1	66	56.64	70	44	5.21	27.17	1.77	3.03	0.71	0.51	0.26
					SCULPIN	5	31.40	42	25	7.86	61.84	0.40	0.82	0.16	0.27	0.07
					WHITEFISH	9	78.33	97	62	10.73	115.11	4.50	9.23	2.37	2.05	4.21
2	APR 12/80	800022	7	1	AGE 1	111	63.95	75	49	4.41	19.46	2.52	4.17	1.10	0.51	0.26
1	APR 12/80	800023	7	5	AGE 0	1	26.00	26	26	0.00	0.00	0.19	0.19	0.19	0.00	0.00
					AGE 1	91	62.80	76	55	4.32	18.64	2.28	3.94	1.40	0.49	0.24

Table 9c - Trawl statistics by tow for Shuswap Lake

TRAWL					CATCH		LENGTH (mm)					WEIGHT (g)				
AREA	DATE	TOW	DEPTH (m)	DURATION (min)	SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
SURVEY # 8014																
13	OCT 15/80	800053	22	3	AGE 0	59	53.46	83	38	9.52	90.69	1.69	4.96	0.52	0.89	0.80
12	OCT 15/80	800054	30	3	AGE 0	82	57.68	77	40	6.48	41.95	1.95	4.22	0.54	0.65	0.42
					AGE 1	6	101.33	120	90	10.29	105.89	11.52	18.85	7.65	3.88	15.08
11	OCT 15/80	800055	22	5	AGE 0	42	64.21	90	52	7.73	59.74	2.78	7.72	1.36	1.18	1.39
10	OCT 15/80	800056	22	5	AGE 0	20	58.55	76	48	5.60	31.35	1.93	4.00	1.02	0.62	0.38
9	OCT 16/80	800057	22	10	AGE 0	7	65.71	71	60	3.84	14.78	3.01	3.96	2.18	0.62	0.38
8	OCT 16/80	800058	30	20	AGE 0	1	47.00	47	47	0.00	0.00	1.05	1.05	1.05	0.00	0.00
					AGE 1	4	84.00	94	65	11.47	131.50	6.22	8.00	2.79	2.08	4.31
				20	OTHER	1	23.00	23	23	0.00	0.00	0.17	0.17	0.17	0.00	0.00
7	OCT 16/80	800059	30	20	NO FISH											
6	OCT 16/80	800060	15	15	AGE 0	14	62.93	74	46	8.28	68.49	2.82	4.61	1.11	1.04	1.09
5	OCT 16/80	800061	22	15	AGE 0	37	61.81	93	37	8.64	74.64	2.63	8.43	0.62	1.23	1.52
					AGE 1	1	81.00	81	81	0.00	0.00	5.31	5.31	5.31	0.00	0.00
4	OCT 16/80	800062	22	10	AGE 0	39	65.21	74	55	5.25	27.55	2.90	4.33	1.88	0.67	0.45
					AGE 1	1	101.00	101	101	0.00	0.00	11.21	11.21	11.21	0.00	0.00
3	OCT 17/80	800063	30	3	AGE 0	57	66.35	79	48	6.84	46.79	3.10	5.05	0.37	0.96	0.92
1	OCT 17/80	800064	37	5	AGE 0	89	59.42	74	44	5.64	31.86	2.24	4.69	0.79	0.67	0.44
					SCULPIN	66	31.48	51	19	9.15	83.73	0.54	2.32	0.07	0.56	0.31
					WHITEFISH	25	100.16	136	53	21.65	468.69	13.09	30.68	1.50	7.12	50.75
2	OCT 17/80	800065	22	5	AGE 0	42	65.05	75	39	7.61	57.85	3.02	4.69	0.65	0.88	0.78

Table 9c - Trawl statistics by tow for Shuswap Lake

TRAWL					CATCH		LENGTH (mm)					WEIGHT (g)				
AREA	DATE	TOW	DEPTH (m)	DURATION (min)	SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
SURVEY # 8204																
1	JUL 19/82	820010	19	2	NO FISH											
13	JUL 20/82	820011	19	10	AGE 0	21	51.38	65	38	6.83	46.71					
					AGE 1	3	93.33	98	90	3.40	11.56					
					WHITEFISH	1	84.00	84	84	0.00	0.00	5.67	5.67	5.67	0.00	0.00
12	JUL 20/82	820012	25	10	AGE 0	14	49.50	58	43	4.72	22.25	1.36	2.03	0.93	0.35	0.12
					AGE 1	3	108.67	111	105	2.62	6.89	15.43	16.29	14.92	0.61	0.37
10	JUL 21/82	820013	13	10	AGE 0	18	46.33	53	33	5.54	30.67	1.00	1.51	0.33	0.33	0.11
11	JUL 21/82	820014	13	10	AGE 0	211	46.18	62	33	5.54	30.65	1.04	2.32	0.34	0.39	0.15
					AGE 1	1	128.00	128	128	0.00	0.00	23.11	23.11	23.11	0.00	0.00
4	JUL 22/82	820015	19	20	AGE 0	4	51.25	54	47	2.68	7.19	1.38	1.50	1.13	0.15	0.02
					AGE 1	1	110.00	110	110	0.00	0.00	15.30	15.30	15.30	0.00	0.00
3	JUL 23/82	820016	7	10	AGE 0	6	43.50	54	34	8.18	66.92	0.99	1.56	0.33	0.48	0.23
2	JUL 23/82	820017	7	20	AGE 0	8	40.50	50	31	7.95	63.25	0.81	1.31	0.36	0.37	0.14
9	JUL 24/82	820018	13	20	AGE 0	14	42.29	57	31	6.47	41.92	0.79	1.95	0.28	0.47	0.22
SURVEY # 8302																
1	OCT 26/83	830004	19	5	AGE 0	150	55.27	74	41	6.86	47.06	1.84	4.45	0.57	0.72	0.52
2	OCT 27/83	830005	7	5	AGE 0	89	55.38	70	42	5.44	29.58	1.82	3.95	0.67	0.57	0.32
2	OCT 27/83	830006	19	5	AGE 0	44	53.82	75	38	8.74	76.47	1.34	2.93	0.60	0.49	0.24
3	OCT 27/83	830007	31	4	AGE 0	269	56.23	74	42	5.70	32.47	1.79	4.02	0.69	0.53	0.28
4	OCT 27/83	830008	25	2	AGE 0	238	62.90	89	45	6.97	48.54	2.10	5.27	0.89	0.62	0.39
4	OCT 27/83	830009	37	1	AGE 0	229	59.34	85	45	5.93	35.17	2.12	4.30	0.95	0.54	0.29
6	OCT 28/83	830010	19	5	AGE 0	30	63.90	75	50	6.01	36.16	2.85	4.68	1.25	0.80	0.64
					AGE 2+	1	195.00	195	195	0.00	0.00	80.76	80.76	80.76	0.00	0.00
5	OCT 28/83	830011	19	3	AGE 0	22	61.59	85	50	8.53	72.70	2.92	7.29	1.68	1.24	1.54
5	OCT 28/83	830012	31	3	AGE 0	39	63.90	80	53	6.52	42.45	2.94	6.00	1.56	1.05	1.11
8	OCT 28/83	830013	19	2	AGE 0	109	61.44	75	43	6.58	43.26	2.56	4.98	0.90	0.88	0.78
8	OCT 28/83	830014	31	2	AGE 0	64	56.61	75	42	6.86	47.11	2.18	4.94	0.86	0.83	0.69

Table 9c - Trawl statistics by tow for Shuswap Lake

TRAWL					CATCH		LENGTH (mm)					WEIGHT (g)				
AREA	DATE	TOW	DEPTH (m)	DURATION (min)	SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
7	OCT 29/83	830015	37	5	AGE 0	14	57.50	70	50	5.25	27.54	2.37	4.17	1.30	0.84	0.71
					AGE 1	3	135.67	145	130	6.65	44.22	30.22	36.26	26.75	4.28	18.36
7	OCT 29/83	830016	19	5	AGE 0	21	61.38	70	41	8.09	65.47	2.69	4.31	0.90	0.96	0.93
13	OCT 29/83	830017	25	2	AGE 0	142	47.61	80	32	7.53	56.69	1.31	5.96	0.34	0.74	0.54
12	OCT 29/83	830018	25	1	AGE 0	221	51.21	74	32	7.54	56.91	1.59	4.71	0.55	0.70	0.49
12	OCT 29/83	830019	37	1	AGE 0	446	50.92	77	35	7.13	50.88	1.43	4.88	0.35	0.67	0.45
9	OCT 29/83	830020	19	1	AGE 0	202	59.48	76	37	7.45	55.47	2.28	4.76	0.55	0.81	0.66
9	OCT 29/83	830021	31	1	AGE 0	229	58.73	77	36	7.46	55.69	2.24	4.77	0.54	0.83	0.68
					AGE 1	1	63.00	63	63	0.00	0.00	2.29	2.29	2.29	0.00	0.00
10	OCT 30/83	830022	31	1	AGE 0	198	59.34	79	36	7.30	53.26	2.52	5.00	0.73	0.88	0.78
10	OCT 30/83	830023	19	1	AGE 0	199	56.21	72	38	7.67	58.87	2.05	4.24	0.62	0.84	0.70
11	OCT 30/83	830024	37	1	AGE 0	129	63.53	75	46	6.12	37.47	2.83	4.48	1.01	0.80	0.64
11	OCT 30/83	830025	19	1	AGE 0	28	61.96	73	45	8.26	68.18	2.70	4.34	0.92	1.07	1.14
SURVEY # 8402																
1	JUL 24/84	840007	19	1	AGE 0	112	52.21	61	42	4.34	18.81	1.53	2.53	0.55	0.37	0.13
2	JUL 25/84	840008	19	1	AGE 0	496	46.45	66	33	5.14	26.45	1.26	4.38	0.39	0.47	0.22
					AGE 1	4	81.25	88	77	4.32	18.69	6.27	7.45	5.04	0.87	0.76
					AGE 2+	1	174.00	174	174	0.00	0.00	73.85	73.85	73.85	0.00	0.00
6	JUL 25/84	840009	19	5	AGE 0	30	52.60	63	30	6.10	37.24	1.67	2.68	0.88	0.46	0.21
					AGE 1	4	97.25	103	88	5.97	35.69	11.70	14.15	7.12	2.80	7.84
5	JUL 25/84	840010	19	10	AGE 0	68	50.10	84	36	7.58	57.50	1.42	6.77	0.57	0.80	0.65
					AGE 1	2	94.50	102	87	7.50	56.25	10.86	13.09	8.64	2.22	4.95
					AGE 2+	3	182.00	188	175	5.35	28.67	76.11	81.99	71.44	4.39	19.27
4	JUL 26/84	840011	19	3	AGE 0	173	52.57	67	36	5.60	31.38	1.63	3.06	0.22	0.54	0.29
					AGE 1	2	95.50	106	85	10.50	110.25	9.27	12.13	6.41	2.86	8.18
3	JUL 26/84	840012	19	3	AGE 0	70	50.87	62	38	4.68	21.94	1.76	2.69	0.84	0.35	0.12
					AGE 1	3	80.00	86	72	5.89	34.67	5.41	6.61	3.88	1.14	1.30
3	JUL 26/84	840013	7	10	AGE 0	12	48.25	60	35	6.92	47.85	1.63	2.71	0.72	0.57	0.33
					AGE 1	1	89.00	89	89	0.00	0.00	7.85	7.85	7.85	0.00	0.00

Table 9c - Trawl statistics by tow for Shuswap Lake

TRAWL					CATCH		LENGTH (mm)					WEIGHT (g)				
AREA	DATE	TOW	DEPTH (m)	DURATION (min)	SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
7	JUL 27/84	840014	19	7	AGE 0	36	50.44	59	38	5.61	31.47	1.85	2.66	0.96	0.44	0.19
					AGE 1	3	100.00	115	91	10.68	114.00	12.19	19.04	8.28	4.86	23.64
					AGE 2+	2	170.00	171	169	1.00	1.00	72.49	85.74	59.23	13.26	175.70
8	JUL 27/84	840015	19	10	AGE 0	10	52.80	69	34	9.46	89.56	1.91	3.37	0.68	0.75	0.57
					AGE 1	3	99.67	104	97	3.09	9.56	12.18	13.48	10.06	1.51	2.29
					AGE 2+	1	165.00	165	165	0.00	0.00	61.30	61.30	61.30	0.00	0.00
11	JUL 27/84	840016	19	2	AGE 0	43	43.88	58	36	4.58	20.94	1.11	1.82	0.22	0.29	0.08
					AGE 1	6	102.00	110	79	10.60	112.33	13.82	15.99	5.95	3.56	12.71
10	JUL 27/84	840017	19	5	AGE 0	9	59.11	86	35	17.76	315.43	2.98	7.54	0.49	2.33	5.45
					AGE 1	3	86.67	89	83	2.62	6.89	7.62	7.94	7.27	0.27	0.08
					AGE 2+	1	189.00	189	189	0.00	0.00	112.37	112.37	112.37	0.00	0.00
9	JUL 28/84	840018	19	10	AGE 0	2	50.00	62	38	12.00	144.00	1.63	2.58	0.68	0.95	0.90
					AGE 1	16	93.69	110	78	8.55	73.09	9.00	13.54	1.79	3.43	11.79
SURVEY # 8403																
2	NOV 9/84	840019	13	10	AGE 0	28	67.07	78	55	4.86	23.64	3.56	5.02	1.84	0.72	0.52
3	NOV 10/84	840020	31	15	AGE 0	14	65.21	71	58	3.12	9.74	3.54	4.23	2.39	0.45	0.20
					AGE 1	1	88.00	88	88	0.00	0.00	8.10	8.10	8.10	0.00	0.00
4	NOV 10/84	840021	37	20	AGE 0	28	69.54	85	57	4.63	21.39	3.32	6.40	0.42	1.03	1.06
					AGE 1	1	96.00	96	96	0.00	0.00	9.78	9.78	9.78	0.00	0.00
5	NOV 10/84	840022	31	15	AGE 0	33	67.94	88	59	5.48	30.00	3.69	7.83	2.22	1.09	1.20
					AGE 1	2	86.00	95	77	9.00	81.00	7.34	9.57	5.10	2.23	5.00
6	NOV 10/84	840023	37	20	AGE 0	15	70.53	82	64	5.40	29.18	4.09	6.09	2.64	0.97	0.94
					AGE 1	3	108.67	113	100	6.13	37.56	14.53	16.59	11.25	2.35	5.50
7	NOV 10/84	840024	43	20	AGE 0	5	68.00	75	52	8.53	72.80	3.75	4.99	1.47	1.22	1.48
					AGE 1	14	109.29	120	91	9.16	83.92	14.76	18.86	10.37	2.94	8.66
12	NOV 11/84	840025	31	10	AGE 0	19	63.63	75	50	7.34	53.81	2.98	4.79	1.35	0.93	0.87
					AGE 1	2	125.00	135	115	10.00	100.00	23.75	27.98	19.53	4.22	17.85
13	NOV 11/84	840026	25	10	AGE 0	13	64.31	78	55	7.25	52.52	3.19	6.71	1.56	1.45	2.12

Table 9c - Trawl statistics by tow for Shuswap Lake

TRAWL					CATCH		LENGTH (mm)					WEIGHT (g)				
AREA	DATE	TOW	DEPTH (m)	DURATION (min)	SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
9	NOV 11/84	840027	37	20	AGE 0	23	67.30	75	45	6.73	45.26	3.45	4.55	0.90	0.89	0.79
					AGE 1	5	110.20	117	94	8.42	70.96	14.76	17.58	8.94	3.15	9.93
10	NOV 12/84	840028	31	10	AGE 0	19	66.53	79	53	7.54	56.88	3.30	5.64	1.75	1.17	1.38
					AGE 1	1	112.00	112	112	0.00	0.00	15.37	15.37	15.37	0.00	0.00
11	NOV 12/84	840029	37	10	AGE 0	44	70.45	86	58	6.66	44.34	3.92	6.18	2.18	1.02	1.04
					AGE 1	7	89.57	122	69	17.33	300.24	9.16	20.90	3.66	5.48	30.05
8	NOV 12/84	840030	37	20	AGE 0	40	69.00	78	53	5.59	31.20	3.61	5.72	1.39	0.89	0.80
					AGE 1	11	100.00	125	62	19.82	392.91	11.87	22.71	3.02	5.65	31.89
					AGE 2+	1	134.00	134	134	0.00	0.00	26.38	26.38	26.38	0.00	0.00
SURVEY # 8502																
2	SEP 23/85	850006	19	20	AGE 0	12	58.25	67	51	5.28	27.85	2.30	3.49	1.37	0.63	0.40
2	SEP 24/85	850007	19	20	AGE 0	1	72.00	72	72	0.00	0.00	4.44	4.44	4.44	0.00	0.00
13	SEP 25/85	850008	19	10	AGE 0	1	71.00	71	71	0.00	0.00	4.06	4.06	4.06	0.00	0.00
					CYPRINID	1	65.00	65	65	0.00	0.00	3.19	3.19	3.19	0.00	0.00
12	SEP 25/85	850009	31	10	AGE 0	61	55.15	74	31	6.80	46.22	1.85	3.64	0.42	0.64	0.41
					AGE 2+	2	181.00	184	178	3.00	9.00	83.88	98.11	69.64	14.23	202.64
11	SEP 25/85	850010	25	10	AGE 0	4	55.50	67	50	6.34	40.25	1.94	3.44	1.19	0.88	0.77
					AGE 1	3	138.33	164	106	24.14	582.89	34.39	51.40	13.14	15.90	252.96
10	SEP 26/85	850011	31	20	AGE 0	3	51.00	54	46	3.56	12.67	1.50	1.91	1.03	0.36	0.13
					AGE 1	1	158.00	158	158	0.00	0.00	45.91	45.91	45.91	0.00	0.00
9	SEP 26/85	850012	31	20	AGE 1	1	117.00	117	117	0.00	0.00	19.20	19.20	19.20	0.00	0.00
7	SEP 26/85	850013	37	20	AGE 1	1	156.00	156	156	0.00	0.00	45.91	45.91	45.91	0.00	0.00
					AGE 2+	11	190.09	205	178	7.56	57.17	80.57	94.91	64.47	8.31	69.09
8	SEP 26/85	850014	49	20	AGE 2+	7	187.86	210	172	11.41	130.12	93.03	126.25	72.47	16.79	282.03
5	SEP 26/85	850015	19	20	AGE 0	8	61.88	68	54	4.83	23.36	2.39	3.10	1.66	0.53	0.28
4	SEP 26/85	850016	19	20	AGE 0	4	59.25	68	54	5.36	28.69	2.22	3.45	1.66	0.72	0.52
3	SEP 26/85	850017	37	20	AGE 0	1	64.00	64	64	0.00	0.00	2.73	2.73	2.73	0.00	0.00
					AGE 1	1	101.00	101	101	0.00	0.00	10.31	10.31	10.31	0.00	0.00
					AGE 2+	1	212.00	212	212	0.00	0.00	114.32	114.32	114.32	0.00	0.00

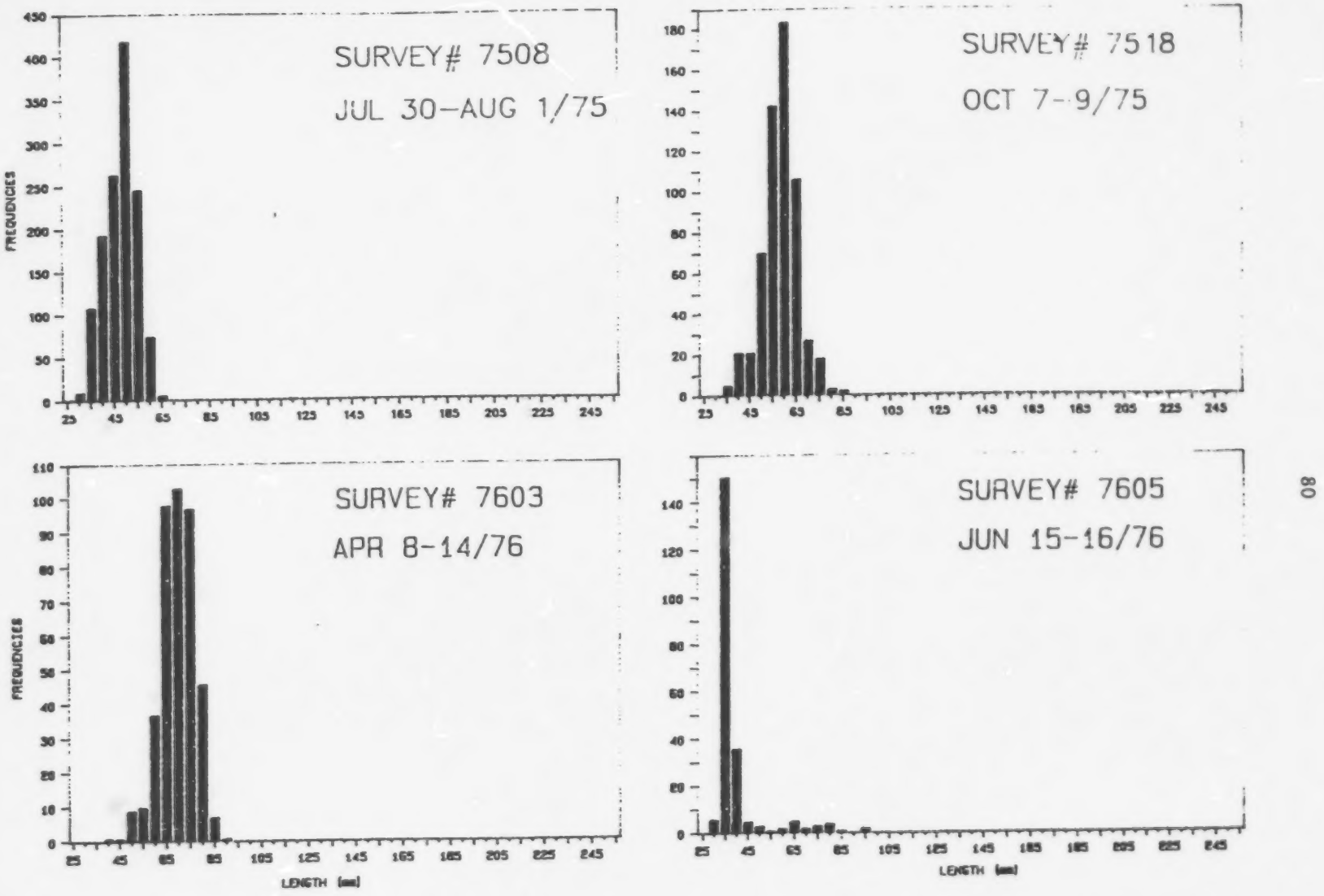


Fig. 17. Sockeye (O. nerka) length frequencies in Shuswap Lake.

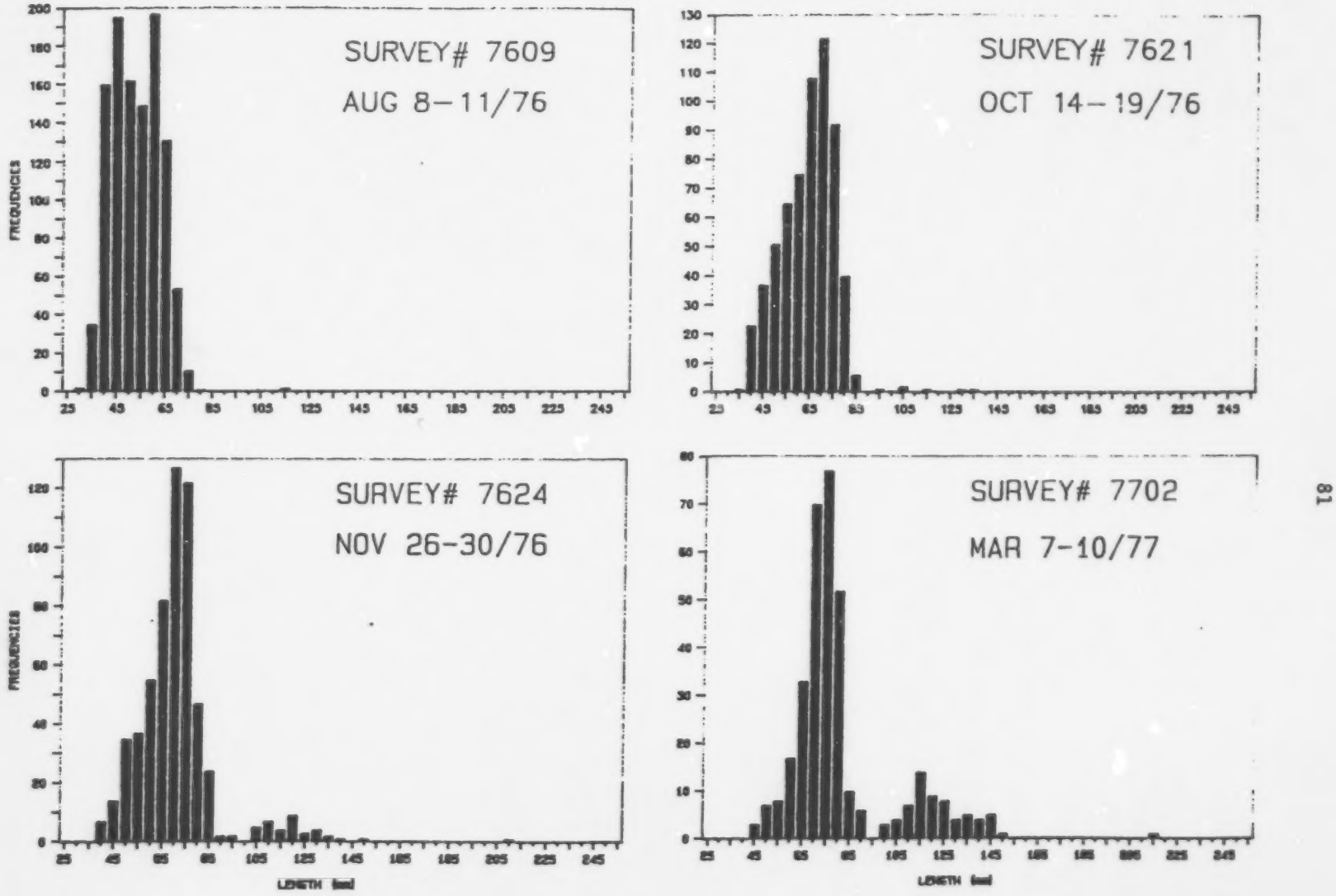


Fig. 17. Continued

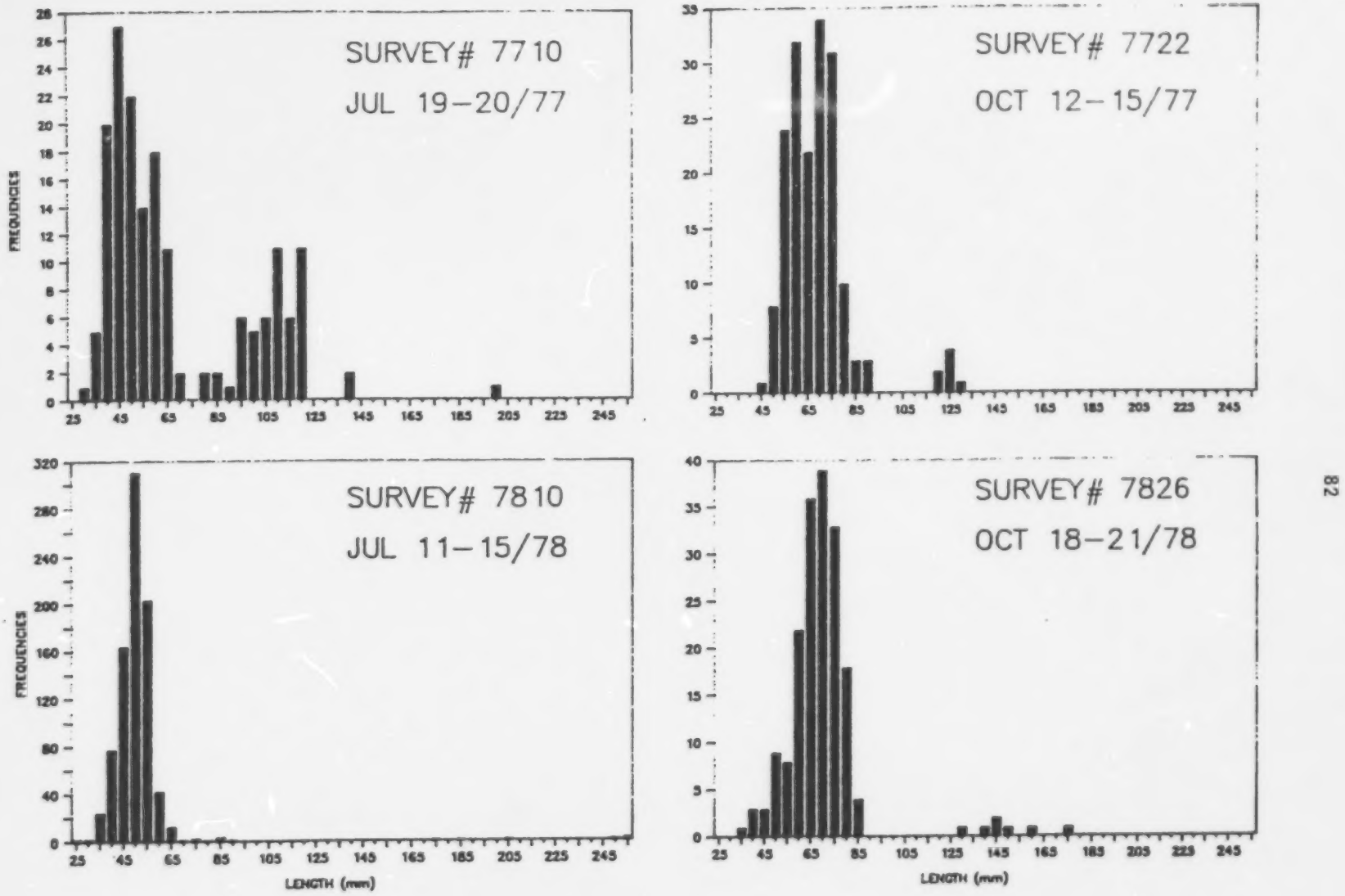
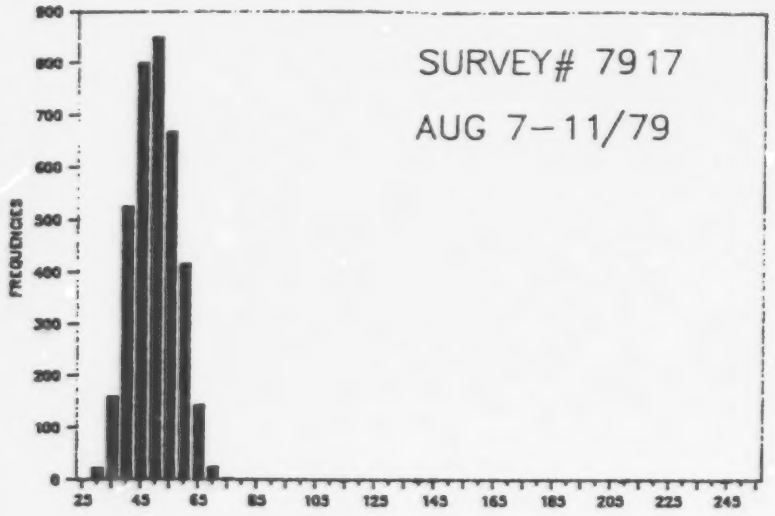
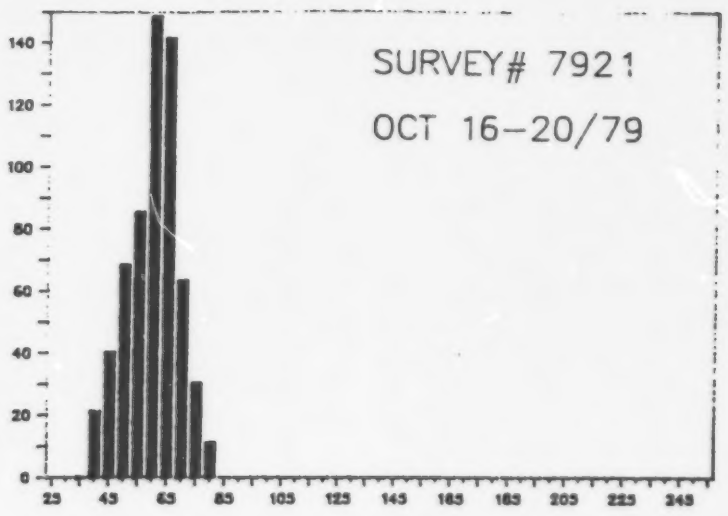
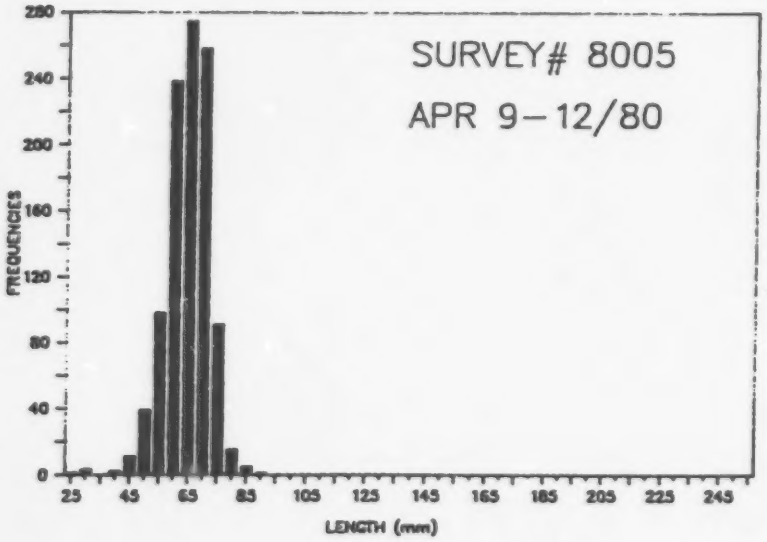


Fig. 17. Continued







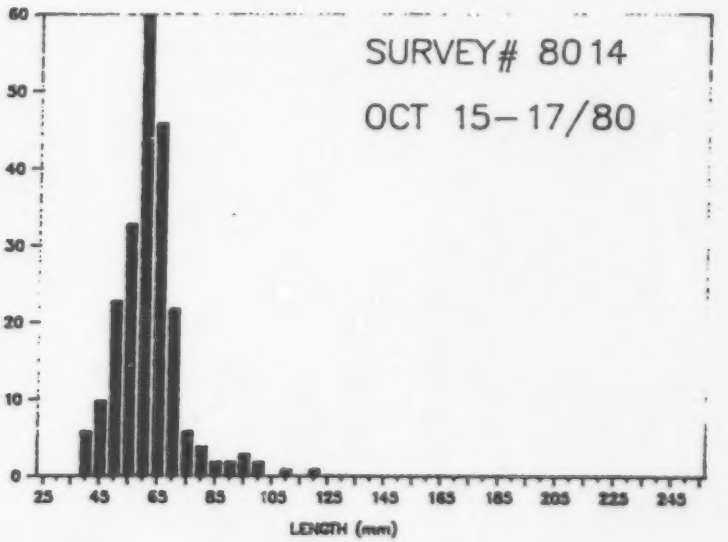


Fig. 17. Continued

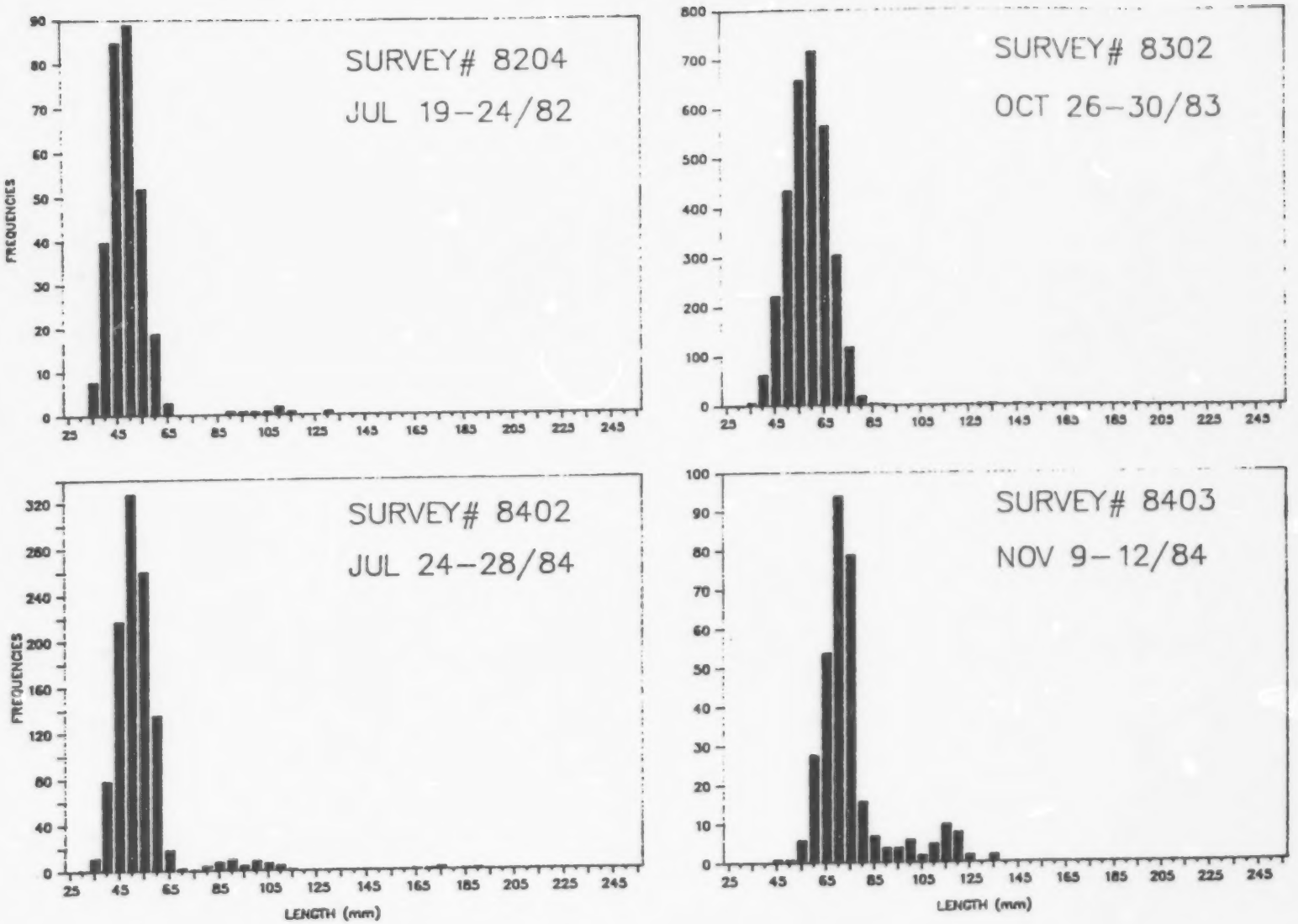


Fig. 17. Continued

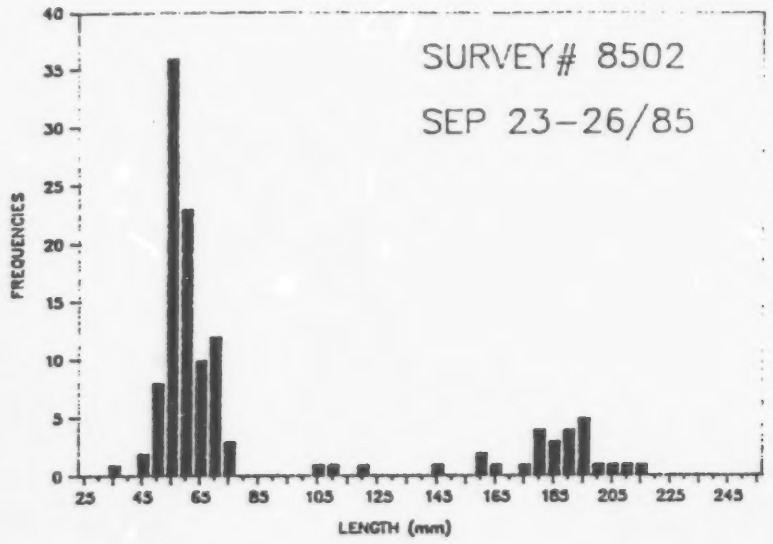


Fig. 17. Continued

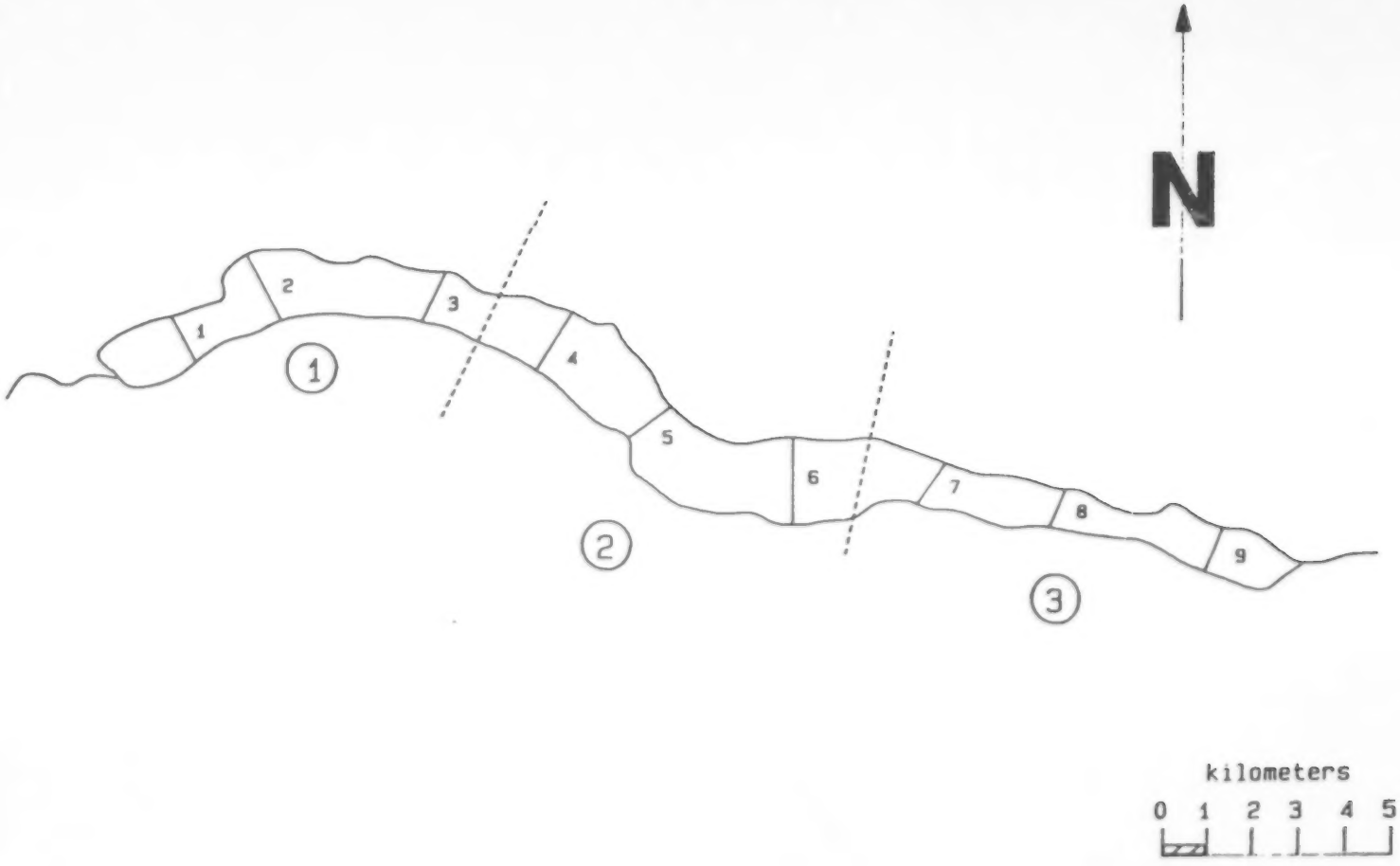


Fig 18. Map of Seton Lake showing areas and transects.

Table 10a - Tow summary for Seton Lake

SURVEY #	SAMPLE DATE	TOW	AREA	SAMPLE TIME	DURATION (min)	DEPTH (m)	SKY CODE	LIGHT CODE	WIND DIR	SURFACE TEMP (C)	CATCH
7505	JUL 7/75	750012				20					7 AGE 0
7619	SEP 29/76	760046	1		60	30					22 AGE 0
											6 AGE 1
	SEP 29/76	760047	3		35	25					11 AGE 0
											2 AGE 1
7721	OCT 11/77	770055	1		15	27					23 AGE 0
											1 AGE 1
											1 AGE 2+
	OCT 11/77	770056	2		5	27					43 AGE 0
7811	JUL 16/78	780056	3	21:15	5	14	3	3	2		33 AGE 0
											4 SCULPIN
	JUL 16/78	780057	2	22:52	15	20	3	3	2		63 AGE 0
											21 AGE 1
											3 AGE 2+
	JUL 17/78	780058	1	00:45	10	20	3	4	0		66 AGE 0
											1 AGE 2+
7824	OCT 16/78	780105	1	19:19	15	32	2	4	0	10.5	4 AGE 0
											6 AGE 1
											1 AGE 2+
	OCT 16/78	780106	2	21:00	15	32	2	5	0	11.5	54 AGE 0
											12 AGE 1
	OCT 17/78	780107	3	22:40	10	28	2	5	0	11.0	31 AGE 0
											3 AGE 1
8113	SEP 23/81	810037	1	19:25	20	31	1	3	0	12.5	1 AGE 1
	SEP 23/81	810038	2	21:20	10	31	1	3	0	13.0	3 AGE 0
											2 AGE 1
											1 AGE 2+
	SEP 23/81	810039	3	23:10	10	31	1	3	0	13.0	15 AGE 0
											1 AGE 1
											3 AGE 2+

Table 10b - Trawl statistics by survey for Seton Lake

SURVEY#	DATES	CATCH		LENGTH (mm)					WEIGHT (g)				
		SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
7505	JUL 7/75	AGE 0	7	32.00	42	28	4.31	18.57	0.38	0.91	0.24	0.22	0.05
7619	SEP 29/76	AGE 0	33	66.30	77	46	6.56	43.00	3.38	5.70	1.21	0.97	0.95
		AGE 1	8	90.63	100	82	6.84	46.73	9.09	11.70	6.30	2.03	4.14
7721	OCT 11/77	AGE 0	166	79.15	95	44	9.83	96.68	5.70	9.31	1.10	1.84	3.37
		AGE 1	1	115.00	115	115	0.00	0.00	15.90	15.90	15.90	0.00	0.00
		AGE 2+	1	182.00	182	182	0.00	0.00	65.75	65.75	65.75	0.00	0.00
7811	JUL 16-17/78	AGE 0	462	38.10	53	15	5.54	30.70	0.70	1.79	0.13	0.31	0.10
		AGE 1	21	91.71	105	79	6.79	46.11	8.09	13.40	4.66	2.08	4.33
		AGE 2+	4	139.00	155	102	21.51	462.50	30.51	38.30	12.09	10.75	115.63
		SCULPIN	4	18.50	20	17	1.12	1.25	0.04	0.07	0.01	0.02	0.00
7824	OCT 16-17/78	AGE 0	89	75.80	100	47	13.18	173.60	5.47	12.55	1.12	3.00	9.00
		AGE 1	21	134.29	162	102	13.38	179.06	28.82	46.45	12.71	7.65	58.55
		AGE 2+	2	162.50	165	160	2.50	6.25	48.03	49.30	46.76	1.27	1.61
8113	SEP 23/81	AGE 0	18	71.44	87	56	9.36	87.58	4.74	9.27	2.05	1.98	3.93
		AGE 1	4	121.00	155	82	26.12	682.50	24.65	46.88	6.89	14.35	206.02
		AGE 2+	4	175.25	186	155	12.46	155.19	64.39	75.26	41.43	13.75	189.11

Table 10c - Trawl statistics by tow for Seton Lake

TRAWL					CATCH		LENGTH (mm)					WEIGHT (g)				
AREA	DATE	TOW	DEPTH (m)	DURATION (min)	SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
SURVEY # 7505																
	JUL 7/75	750012	20		AGE 0	7	32.00	42	28	4.31	18.57	0.38	0.91	0.24	0.22	0.05
SURVEY # 7619																
1	SEP 29/76	760046	30	60	AGE 0	22	66.73	77	50	6.05	36.65	3.43	5.70	1.40	0.94	0.88
					AGE 1	6	91.83	100	82	7.31	53.47	9.38	11.70	6.30	2.24	5.00
3	SEP 29/76	760047	25	35	AGE 0	11	65.45	76	46	7.39	54.61	3.28	5.30	1.21	1.03	1.05
					AGE 1	2	87.00	90	84	3.00	9.00	8.20	8.90	7.50	0.70	0.49
SURVEY # 7721																
1	OCT 11/77	770055	27	15	AGE 0	123	82.98	95	66	6.16	37.93	6.38	9.31	2.78	1.38	1.91
					AGE 1	1	115.00	115	115	0.00	0.00	15.90	15.90	15.90	0.00	0.00
					AGE 2+	1	182.00	182	182	0.00	0.00	65.75	65.75	65.75	0.00	0.00
2	OCT 11/77	770056	27	5	AGE 0	43	68.21	85	44	10.16	103.19	3.76	6.66	1.10	1.57	2.47
SURVEY # 7811																
3	JUL 16/78	780056	14	5	AGE 0	333	37.77	51	15	5.51	30.35	0.67	1.52	0.13	0.30	0.09
					SCULPIN	4	18.50	20	17	1.12	1.25	0.04	0.07	0.02	0.02	0.00
2	JUL 16/78	780057	20	15	AGE 0	63	40.56	53	30	5.75	33.07	0.82	1.79	0.27	0.38	0.14
					AGE 1	21	91.71	105	79	6.79	46.11	8.09	13.40	4.66	2.08	4.33
					AGE 2+	3	135.00	155	102	23.51	552.67	28.17	38.30	12.09	11.50	132.16
1	JUL 17/78	780058	20	10	AGE 0	66	37.39	50	29	4.83	23.36	0.72	1.61	0.27	0.27	0.07
					AGE 2+	1	151.00	151	151	0.00	0.00	37.55	37.55	37.55	0.00	0.00

Table 10c - Trawl statistics by tow for Seton Lake

TRAWL					CATCH		LENGTH (mm)					WEIGHT (g)				
AREA	DATE	TOW	DEPTH (m)	DURATION (min)	SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
SURVEY # 7824																
1	OCT 16/78	780105	32	15	AGE 0	4	68.25	75	62	5.80	33.69	3.00	3.89	2.42	0.54	0.29
					AGE 1	6	135.83	162	102	18.46	340.81	29.67	46.45	12.71	10.46	109.48
					AGE 2+	1	160.00	160	160	0.00	0.00	46.76	46.76	46.76	0.00	0.00
2	OCT 16/78	780106	32	15	AGE 0	54	81.57	100	56	11.84	140.24	6.91	12.55	1.83	2.82	7.97
					AGE 1	12	130.33	143	118	7.82	61.22	26.75	32.46	18.30	4.45	19.81
3	OCT 17/78	780107	28	10	AGE 0	31	66.71	90	47	10.08	101.69	3.29	6.83	1.12	1.66	2.76
					AGE 1	3	147.00	160	136	9.90	98.00	35.40	45.11	28.56	7.06	49.79
SURVEY # 8113																
1	SEP 23/81	810037	31	20	AGE 1	1	155.00	155	155	0.00	0.00	46.88	46.88	46.88	0.00	0.00
2	SEP 23/81	810038	31	10	AGE 0	3	68.33	87	58	13.22	174.89	4.73	9.27	2.42	3.21	10.31
					AGE 1	2	123.50	128	119	4.50	20.25	22.41	23.90	20.92	1.49	2.22
					AGE 2+	1	175.00	175	175	0.00	0.00	66.05	66.05	66.05	0.00	0.00
3	SEP 23/81	810039	31	10	AGE 0	15	72.07	84	56	8.23	67.80	4.75	7.27	2.05	1.63	2.65
					AGE 1	1	82.00	82	82	0.00	0.00	6.89	6.89	6.89	0.00	0.00
					AGE 2+	3	175.33	186	155	14.38	206.89	63.83	75.26	41.43	15.84	250.92

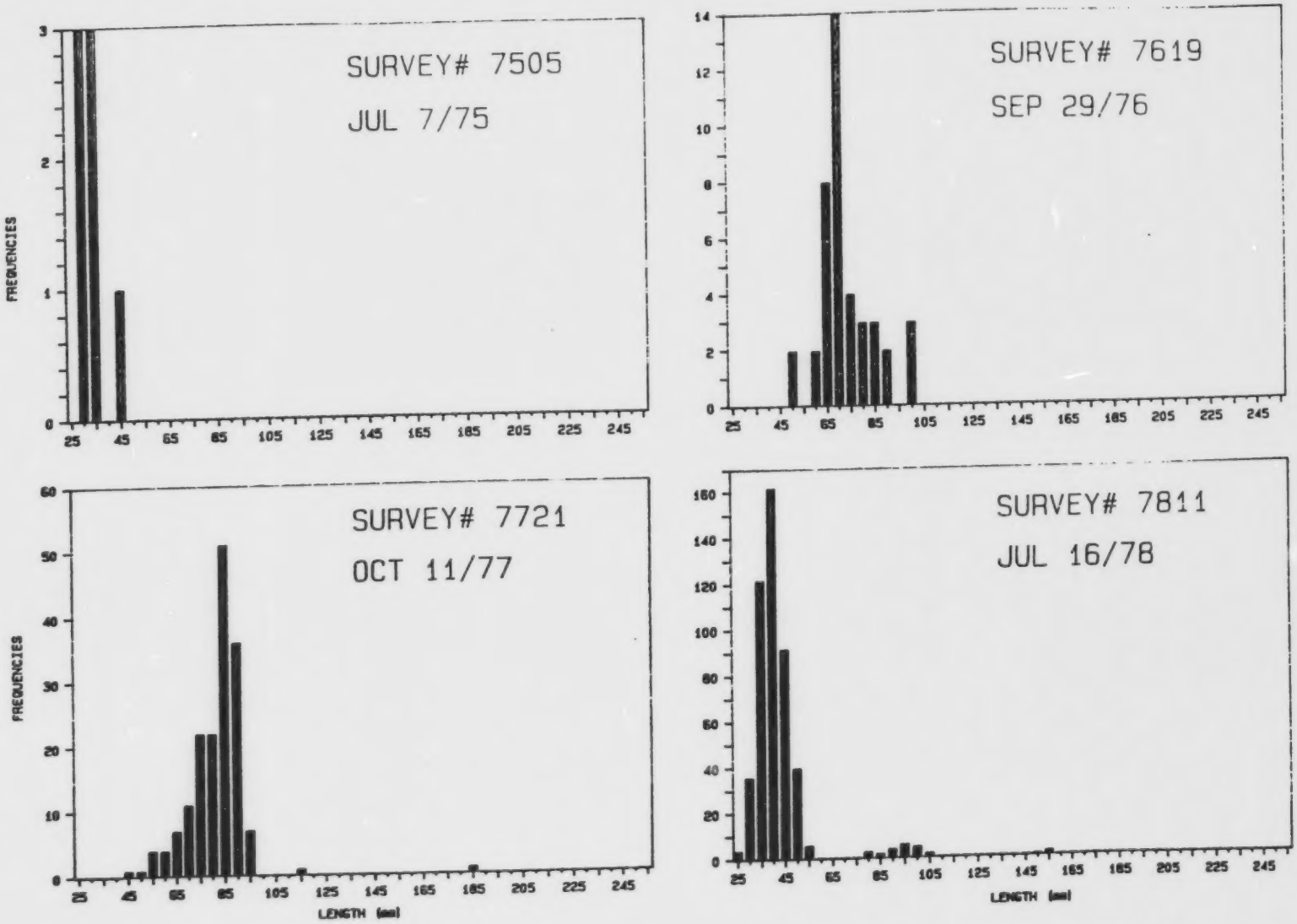
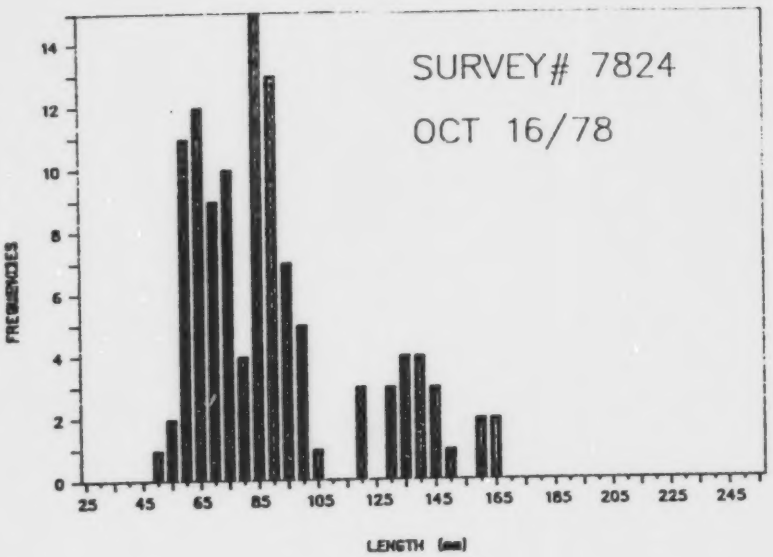


Fig. 19. Sockeye (O. Nerka) length frequencies in Seton Lake.



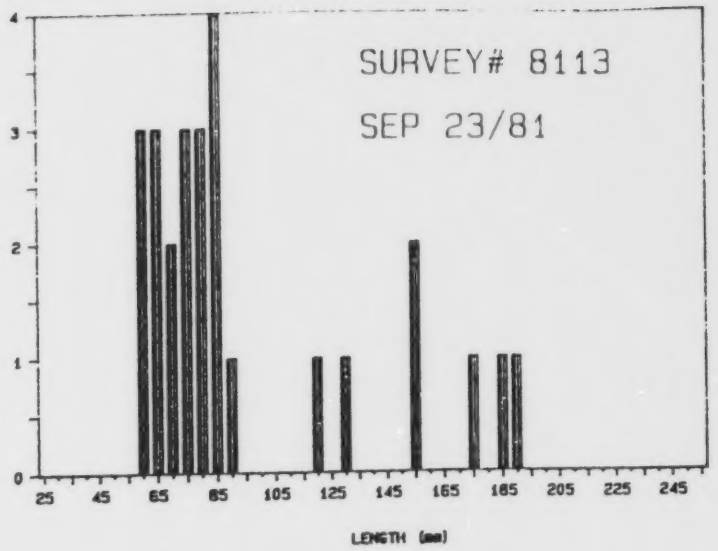


Fig. 19. Continued.

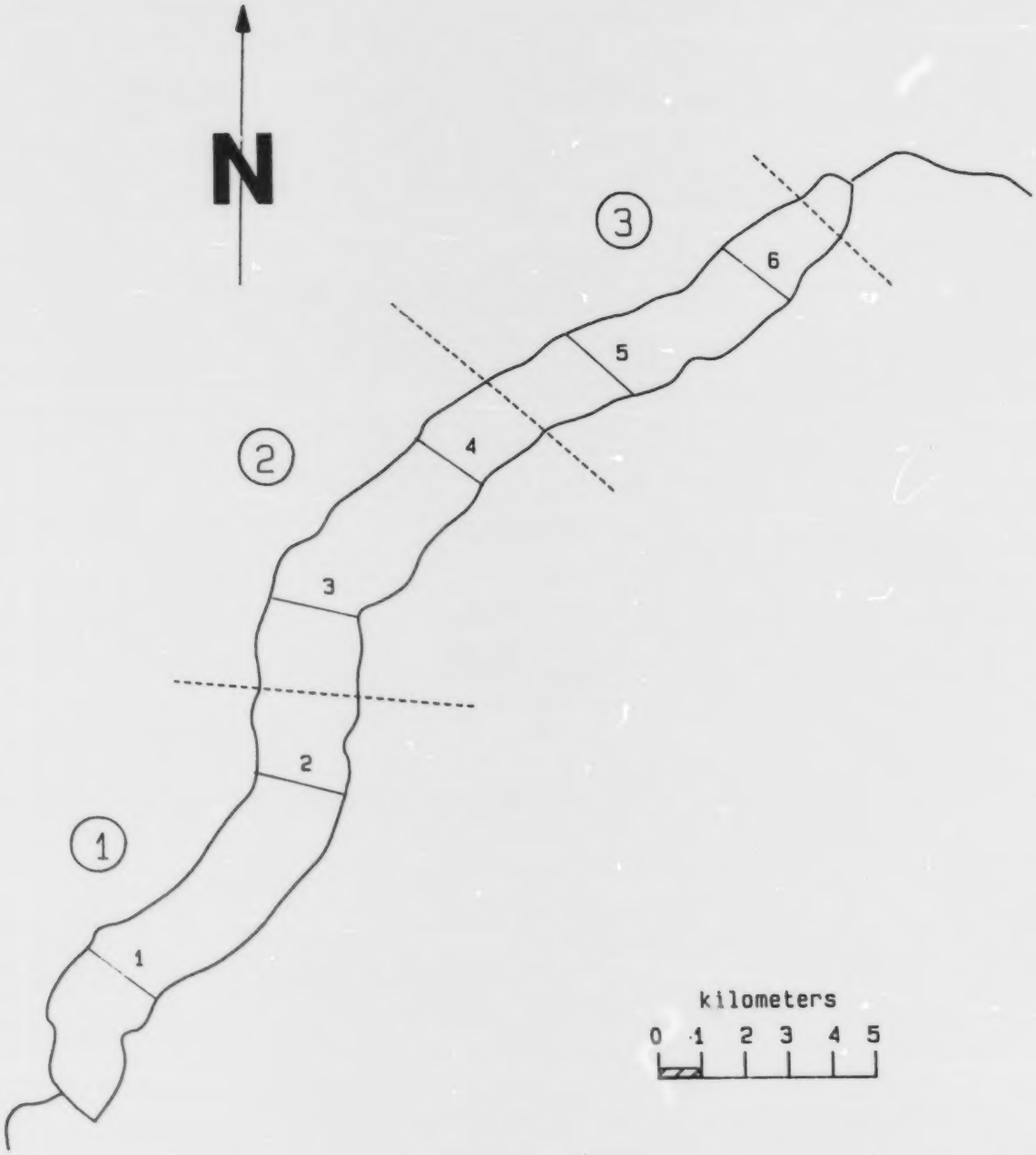


Fig. 20. Map of Anderson Lake showing areas and transects.

Table 11a - Tow summary for Anderson Lake

SURVEY #	SAMPLE DATE	TOW	AREA	SAMPLE TIME	DURATION (min)	DEPTH (m)	SKY CODE	LIGHT CODE	WIND DIR	SURFACE TEMP (C)	CATCH
7506	JUL 17/75	750012	2								7 AGE 0
7617	SEP 21/76	760043	3		30	22					76 AGE 0
	SEP 21/76	760044	1		15	30					69 AGE 0
											1 AGE 1
7724	NOV 2/77	770066	2		40	45					60 AGE 0
											1 AGE 1
											1 AGE 2+
	NOV 2/77	770067	1		30	32					109 AGE 0
											1 AGE 1
											1 AGE 2+
											2 SCULPIN
7814	AUG 14/78	780066	1	21:30	5	18		5	3 5	16.0	30 AGE 0
											2 AGE 1
	AUG 14/78	780067	2	23:00	5	38		3	3 5	17.0	41 AGE 0
											47 AGE 1
											5 AGE 2+
	AUG 15/78	780068	3	00:41	5	28		3	3 5	17.5	100 AGE 0
											10 AGE 1

Table 11b - Trawl statistics by survey for Anderson Lake

SURVEY#	DATES	CATCH		LENGTH (mm)					WEIGHT (g)				
		SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
7506	JUL 15-17/75	AGE 0	131	44.66	71	23	14.00	195.96	1.11	3.46	0.12	0.82	0.67
		AGE 1	2	89.00	95	83	6.00	36.00	6.64	8.08	5.20	1.44	2.07
		AGE 2+	1	197.00	197	197	0.00	0.00	94.40	94.40	94.40	0.00	0.00
7617	SEP 21/76	AGE 0	145	41.88	76	24	16.70	279.03	1.08	4.40	0.13	1.30	1.69
		AGE 1	1	99.00	99	99	0.00	0.00	8.52	8.52	8.52	0.00	0.00
7724	NOV 2/77	AGE 0	169	50.24	82	28	15.95	254.50	1.51	5.02	0.18	1.27	1.61
		AGE 1	2	131.00	131	131	0.00	0.00	21.24	21.28	21.19	0.05	0.00
		AGE 2+	2	234.00	252	216	18.00	324.00	153.07	183.58	122.55	30.51	931.17
		SCULPIN	2	31.00	37	25	6.00	36.00	0.30	0.47	0.13	0.17	0.03
7814	AUG 14-15/78	AGE 0	171	25.79	34	21	2.46	6.04	0.18	0.46	0.07	0.08	0.00
		AGE 1	59	61.05	75	48	6.68	44.66	2.28	3.96	1.12	0.67	0.44
		AGE 2+	5	90.40	101	75	12.18	148.24	7.53	10.55	4.00	2.90	8.42

Table 11c - Trawl statistics by tow for Anderson Lake

TRAWL					CATCH		LENGTH (mm)					WEIGHT (g)				
AREA	DATE	TOW	DEPTH (m)	DURATION (min)	SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
SURVEY # 7506																
2	JUL 17/75	750012			AGE 0	7	32.00	42	28	4.31	18.57	0.38	0.91	0.24	0.22	0.05
SURVEY # 7617																
3	SEP 21/76	760043	22	30	AGE 0	76	33.32	71	24	8.04	64.72	0.42	3.27	0.13	0.47	0.22
1	SEP 21/76	760044	30	15	AGE 0	69	51.32	76	29	18.58	345.20	1.80	4.40	0.24	1.52	2.32
					AGE 1	1	99.00	99	99	0.00	0.00	8.52	8.52	8.52	0.00	0.00
SURVEY # 7724																
2	NOV 2/77	770066	45	40	AGE 0	60	53.48	81	28	17.26	298.02	1.81	4.85	0.18	1.39	1.92
					AGE 1	1	131.00	131	131	0.00	0.00	21.28	21.28	21.28	0.00	0.00
					AGE 0	109	48.46	82	29	14.89	221.59	1.35	5.02	0.28	1.17	1.37
					AGE 1	1	131.00	131	131	0.00	0.00	21.19	21.19	21.19	0.00	0.00
					AGE 2+	1	252.00	252	252	0.00	0.00	183.58	183.58	183.58	0.00	0.00
					SCULPIN	2	31.00	37	25	6.00	36.00	0.30	0.47	0.13	0.17	0.03
SURVEY # 7814																
1	AUG 14/78	780066	18	5	AGE 0	30	26.43	33	22	2.88	8.31	0.23	0.44	0.11	0.08	0.00
					AGE 1	2	54.00	55	53	1.00	1.00	1.63	1.71	1.56	0.08	0.00
2	AUG 14/78	780067	38	5	AGE 0	41	26.71	34	22	2.22	4.94	0.18	0.32	0.11	0.05	0.00
					AGE 1	47	61.49	75	48	6.31	39.82	2.34	3.96	1.12	0.65	0.43
					AGE 2+	5	90.40	101	75	12.18	148.24	7.53	10.55	4.00	2.90	8.42
3	AUG 15/78	780068	28	5	AGE 0	100	25.22	32	21	2.24	5.01	0.16	0.46	0.07	0.08	0.00
					AGE 1	10	60.40	73	48	8.05	64.84	2.12	3.41	1.22	0.69	0.48

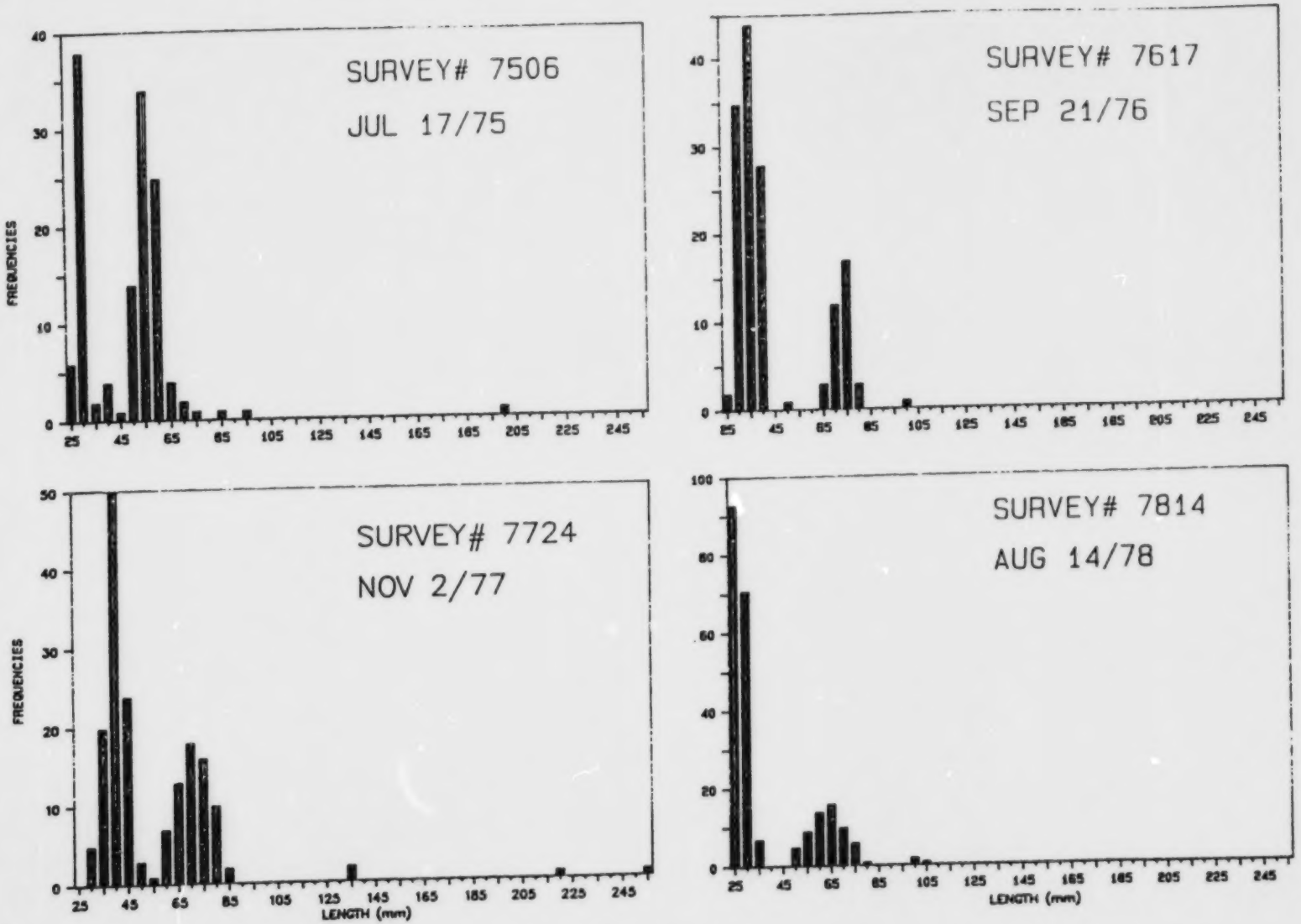


Fig. 21. Sockeye (O. Nerka) length frequencies in Anderson Lake.

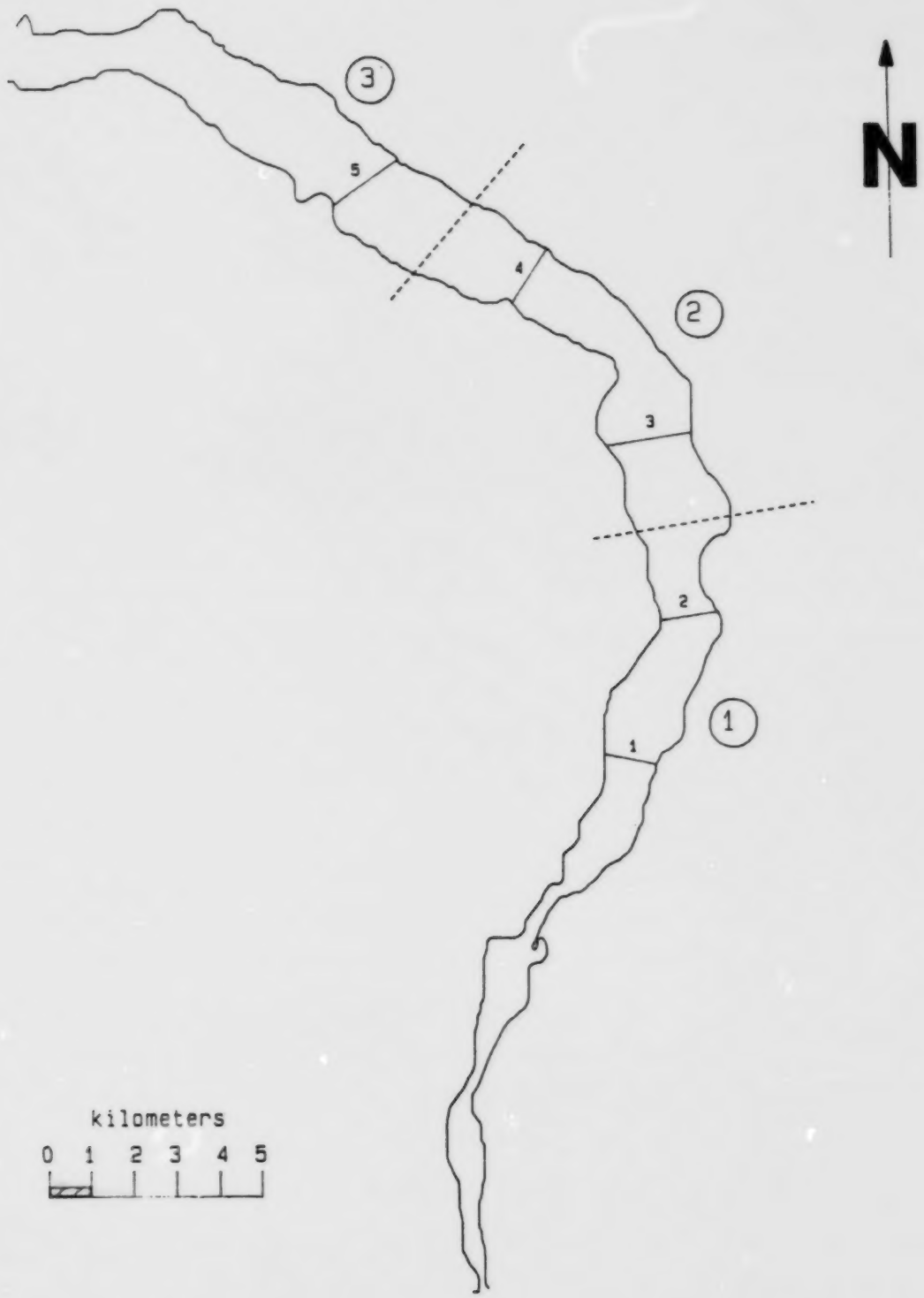


Fig. 22. Map of Lillooet Lake showing areas and transects.

Table 12a - Tow summary for Lillooet Lake

SURVEY #	SAMPLE DATE	TOW	AREA	SAMPLE TIME	DURATION (min)	DEPTH (m)	SKY CODE	LIGHT CODE	WIND DIR	SURFACE TEMP (C)	CATCH
7618	SEP 23/76	760045	2		60	35					75 AGE 0
7815	AUG 15/78	780069	1	21:30	10	38	6	3	4	13.0	28 AGE 0
											15 SCULPIN
	AUG 15/78	780070	2	23:11	10	38	6	3	0	13.0	34 AGE 0
											1 AGE 1
											1 OTHER
											42 SCULPIN
	AUG 16/78	780071	3	01:07	5	38	6	3	6	13.0	143 AGE 0
											86 SCULPIN

Table 12b - Trawl statistics by survey for Lillooet Lake

SURVEY#	DATES	CATCH		LENGTH (mm)					WEIGHT (g)				
		SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
7618	SEP 23/76	AGE 0	75	69.16	79	61	3.27	10.67	3.99	6.17	2.70	0.62	0.38
7815	AUG 15-16/78	AGE 0	205	53.83	65	45	3.87	14.95	1.73	2.94	0.98	0.38	0.14
		AGE 1	2	174.50	250	99	75.50	5.7E3	95.60	180.00	11.19	84.40	7123.36
		OTHER	1	125.00	125	125	0.00	0.00	3.09	3.09	3.09	0.00	0.00
		SCULPIN	143	15.41	23	11	2.22	4.94	0.04	0.14	0.01	0.02	0.00

Table 12c - Trawl statistics by tow for Lillooet Lake

TRAWL					CATCH		LENGTH (mm)					WEIGHT (g)				
AREA	DATE	TOW	DEPTH (m)	DURATION (min)	SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
SURVEY # 7618																
2	SEP 23/76	760045	35	60	AGE 0	75	69.16	79	61	3.27	10.67	3.99	6.17	2.70	0.62	0.38
SURVEY # 7815																
1	AUG 15/78	780069	38	10	AGE 0	28	54.50	65	45	4.22	17.82	1.70	2.87	0.98	0.41	0.17
					SCULPIN	15	14.67	21	12	2.44	5.96	0.05	0.14	0.03	0.03	0.00
2	AUG 15/78	780070	38	10	AGE 0	34	54.29	64	48	3.49	12.21	1.85	2.73	1.23	0.33	0.11
					AGE 1	1	99.00	99	99	0.00	0.00	11.19	11.19	11.19	0.00	0.00
					OTHER	1	125.00	125	125	0.00	0.00	3.09	3.09	3.09	0.00	0.00
					SCULPIN	42	14.81	23	11	2.11	4.44	0.03	0.12	0.02	0.02	0.00
3	AUG 16/78	780071	38	5	AGE 0	143	53.59	63	45	3.85	14.84	1.71	2.94	1.03	0.37	0.14
					SCULPIN	86	15.84	21	11	2.13	4.55	0.04	0.13	0.02	0.02	0.00

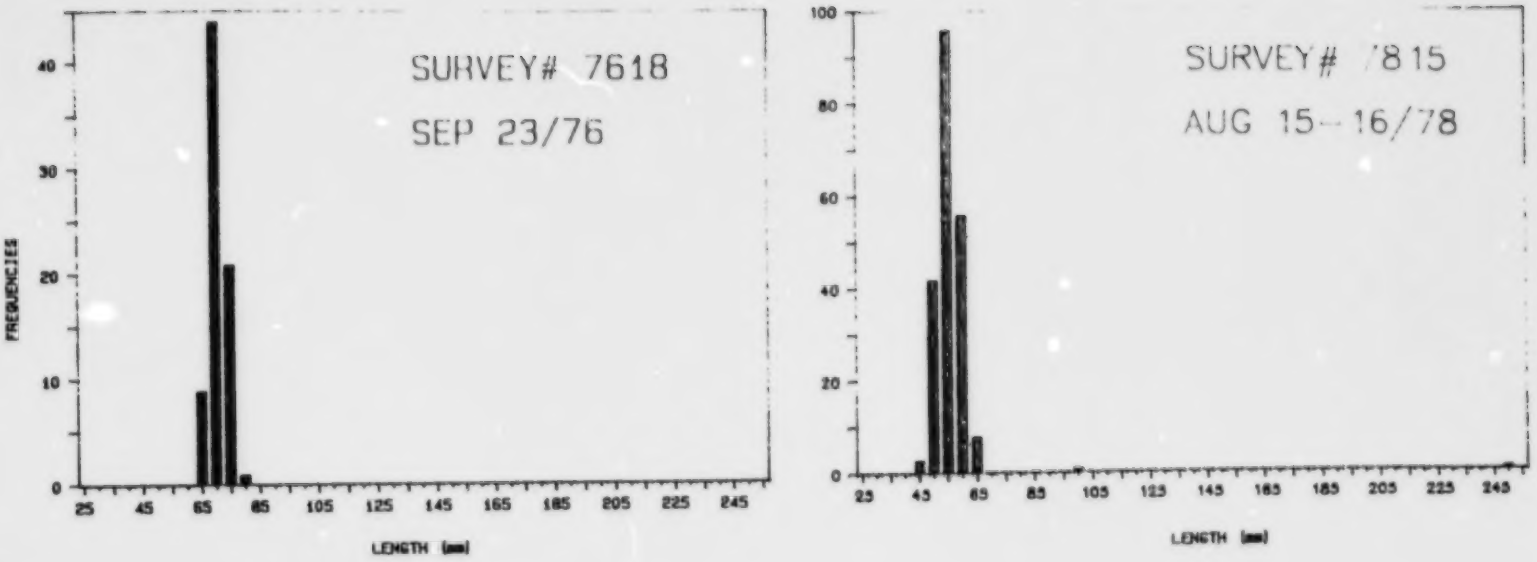


Fig. 23. Sockeye (O. nerka) length frequencies in Lillooet Lake.

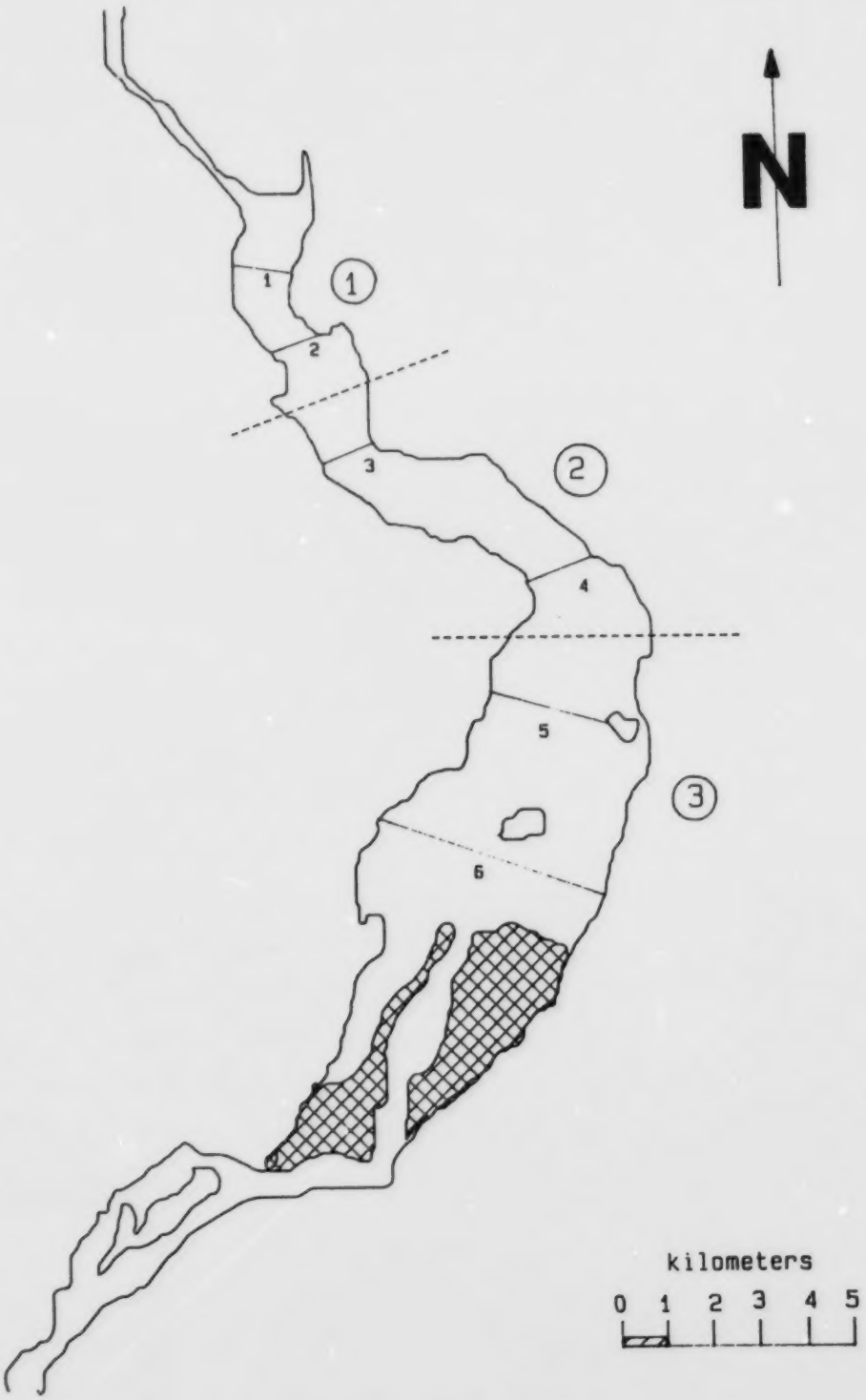


Fig. 24. Map of Pitt Lake showing areas and transects.

Table 13a - Tow summary for Pitt Lake

SURVEY #	SAMPLE DATE	TOW	AREA	SAMPLE TIME	DURATION (min)	DEPTH (m)	SKY CODE	LIGHT CODE	WIND DIR	SURFACE TEMP (C)	CATCH
7719	OCT 5/77	770047	1		30	33					21 AGE 0
											142 SMELT
											32 STICKLEBACK
	OCT 5/77	770048	1		5	15					02 SMELT
											19 STICKLEBACK
	OCT 5/77	770049	3		30	35					3 AGE 0
											44 SMELT
											249 STICKLEBACK
	OCT 5/77	770050	3			10					1 AGE 0
											59 SMELT
											238 STICKLEBACK
7804	APR 12/78	780006	1	22:35	5	20		1	3	0 7.0	40 AGE 0
											5 AGE 1
											1 SCULPIN
											74 SMELT
											1 STICKLEBACK
	APR 12/78	780007	2	23:22	5	11		1	3	0 7.5	1 AGE 1
											62 SMELT
											9 STICKLEBACK
	APR 12/78	780008	2	23:49	10	36		1	3	0 7.5	4 AGE 0
											33 AGE 1
											67 SMELT
											4 STICKLEBACK
	APR 13/78	780009	3	02:28	5	10		6	3	7 6.5	1 AGE 1
											18 SMELT
											65 STICKLEBACK
	APR 13/78	780010	2	13:09	10	30		3	1	3 7.0	21 SMELT
											5 STICKLEBACK
	APR 13/78	780011	2	15:55	20	40		3	1	3 7.0	19 SMELT
	APR 13/78	780012	2	19:41	10	20		2	2	7 7.0	16 AGE 0
											3 AGE 1
											30 SMELT
	APR 13/78	780013	2	20:18	7	40		2	3	0 7.0	19 AGE 0
											14 AGE 1
											51 SMELT
	APR 14/78	780014	2	01:40	5	10		0	3	7 7.0	3 AGE 0
											56 SMELT
											1 STICKLEBACK
	APR 14/78	780015	2	10:00	10	10		2	1	2 7.0	1 SMELT
7805	MAY 1/78	780016	1	21:19	5	15		5	3	7 8.5	41 AGE 0
											1 AGE 1
											196 SMELT
											1 STICKLEBACK
7805	MAY 1/78	780017	2	22:34	5	15		5	3	7 8.5	18 AGE 0
											2 AGE 1
											1 SCULPIN

Table 13a - Tow summary for Pitt Lake

SURVEY #	SAMPLE DATE	TOW	AREA	SAMPLE TIME	DURATION (min)	DEPTH (m)	SKY CODE	LIGHT CODE	WIND DIR		SURFACE TEMP (C)	CATCH
												10 SMELT
	MAY 2/78	780018	3	01:10	20	10		5	3	0	8.0	3 AGE 1
												28 SMELT
												1 STICKLEBACK
	MAY 2/78	780019	2	18:45	20	32		3	1	3	8.0	4 SMELT
	MAY 2/78	780020	2	19:58	15	40		2	2	3	8.0	522 AGE 0
												11 SMELT
	MAY 2/78	780021	2	21:02	10	20		1	3	3	8.0	205 AGE 0
												13 AGE 1
												39 SMELT
	MAY 3/78	780022	2	03:35	5	25		5	3	3	8.0	264 AGE 0
												8 AGE 1
												49 SMELT
7807	JUN 8/78	780025	2	20:23	5	12		5	2	0	16.0	26 SMELT
	JUN 8/78	780026	1	22:04	5	10		3	3	3	15.0	2 AGE 0
												1 AGE 1
												1 OTHER
												55 SMELT
	JUN 8/78	780027	2	23:32	5	07		3	3	3	16.0	1 AGE 1
												94 SMELT
	JUN 9/78	780028	3	01:00	5	07		3	3	3	16.0	3 AGE 0
												57 SMELT
7809	JUN 27/78	780035	2	18:57	10	10		2	1	0	17.0	2 AGE 0
												51 SMELT
	JUN 27/78	780036	2	19:26	10	25		2	1	0	17.0	16 SMELT
	JUN 27/78	780037	1	21:46	5	08		1	4	7	16.5	147 SMELT
	JUN 27/78	780038	2	22:45	5	06		1	4	7	17.0	74 SMELT
	JUN 28/78	780039	3	00:55	10	08		1	3	0	17.0	4 AGE 0
												21 SMELT
												13 STICKLEBACK
	JUN 28/78	780040	2	03:16	10	10		1	0	8	17.0	40 SMELT
7813	AUG 3/78	780061	2	19:20	10	10		2	1	3	21.5	1 SCULPIN
												65 SMELT
												2 STICKLEBACK
	AUG 3/78	780062	1	21:10	10	08		1	3	3	19.5	3 AGE 0
												1 AGE 1
												100 SMELT
												1 STICKLEBACK
	AUG 3/78	780063	2	22:53	10	20		1	3	3	21.5	4 AGE 0
												222 SMELT
7813	AUG 3/78	780063	2	22:53	10	20		1	3	3	21.5	5 STICKLEBACK
	AUG 3/78	780064	2	23:45	5	12		1	3	3	21.5	7 AGE 0
												1 SCULPIN
												200 SMELT
												5 STICKLEBACK

Table 13a - Tow summary for Pitt Lake

SURVEY #	SAMPLE DATE	TOW	AREA	SAMPLE TIME	DURATION (min)	DEPTH (m)	SKY CODE	LIGHT CODE	WIND DIR		SURFACE TEMP (C)	CATCH
	AUG 4/78	780065	3	02:28	5	08		1	3	4	19.0	1 AGE 0 2 SMELT 403 STICKLEBACK
7828	NOV 22/78	780124	2	16:40	10	20		1	2	0	5.5	18 SMELT 180 STICKLEBACK
	NOV 22/78	780125	1	17:55	10	07		1	3	0	6.0	118 SMELT 58 STICKLEBACK
	NOV 22/78	780126	2	19:05	20	44		1	3	0	5.5	7 AGE 0 1 AGE 1 45 SMELT 35 STICKLEBACK
	NOV 22/78	780127	3	22:15	15	12		1	3	0	6.0	2 SCULPIN 11 SMELT 122 STICKLEBACK
7901	APR 25/79	790001	1	22:54	5	15		1	3	7	6.5	18 AGE 0 41 SMELT
	APR 25/79	790002	1	23:25	20	44		1	3	7	6.5	30 AGE 0 1 AGE 1 1 SCULPIN 30 SMELT
	APR 26/79	790003	2	01:12	5	07		1	3	7	7.0	2 AGE 0 16 SMELT 307 STICKLEBACK
	APR 26/79	790004	2	01:37	20	30		1	3	7	7.0	2 AGE 1 15 SMELT 137 STICKLEBACK
	APR 26/79	790005	3	03:53	15	15		1	2	7	5.5	4 SMELT 65 STICKLEBACK
	APR 30/79	790006	1	20:45	5	15		1	3	0	7.5	53 AGE 0 83 SMELT
	APR 30/79	790007	1	21:15	15	37		1	3	0	7.5	137 AGE 0 57 SMELT
	APR 30/79	790008	2	22:20	10	15		1	3	0	7.5	24 AGE 0 2 AGE 1 26 SMELT

Table 13a - Tow summary for Pitt Lake

SURVEY #	SAMPLE DATE	TOW	AREA	SAMPLE TIME	DURATION (min)	DEPTH (m)	SKY CODE	LIGHT CODE	WIND DIR		SURFACE TEMP (C)	CATCH
7901	APR 30/79	790009	3	24:00	20	07		1	3	0	9.5	1 AGE 1 26 SMELT 65 STICKLEBACK
	MAY 1/79	790010	3	01:30	15	22		1	3	0	6.5	1 OTHER 5 STICKLEBACK 13 SMELT 223 STICKLEBACK
7902	MAY 7/79	790011	1	21:05	5	15		1	4	0	7.0	4 AGE 0 28 SMELT
	MAY 7/79	790012	1	21:30	10	30		1	4	0	7.0	82 AGE 0 1 AGE 1 1 OTHER 56 SMELT
	MAY 7/79	790013	2	22:50	15	22		1	4	0	8.5	16 AGE 0 6 SMELT 4 STICKLEBACK
	MAY 8/79	790014	3	00:03	20	12		1	3	0	7.5	8 SMELT 11 STICKLEBACK
	MAY 8/79	790015	3	01:30	15	15		1	3	0	8.5	1 SCULPIN 10 SMELT 29 STICKLEBACK
7903	MAY 14/79	790016	1	21:10	5	07		2	3	0	7.5	20 AGE 0 115 SMELT
	MAY 14/79	790017	1	21:30	10	30		2	3	0	7.5	55 AGE 0 1 AGE 1 119 SMELT
	MAY 14/79	790018	2	22:36	0	22		2	3	0	9.0	290 AGE 0 2 AGE 1 26 SMELT
	MAY 15/79	790019	3	00:30	20	10		2	3	0	10.0	19 SMELT 1 WHITEFISH
7904	MAY 23/79	790020	1	21:25	10	22		2	3	0	9.5	38 AGE 0 34 SMELT
	MAY 23/79	790021	2	22:22	5	15		2	3	0	11.0	192 AGE 0 51 SMELT
	MAY 24/79	790022	3	00:10	20	07		2	3	0	12.0	2 AGE 0 1 AGE 1 10 SMELT
7905	MAY 28/79	790023	1	21:15	10	22		3	3	4	9.5	22 AGE 0 18 SMELT

Table 13a - Tow summary for Pitt Lake

SURVEY #	SAMPLE DATE	TOW	AREA	SAMPLE TIME	DURATION (min)	DEPTH (m)	SKY CODE	LIGHT CODE	WIND DIR		SURFACE TEMP (C)	CATCH
7905	MAY 28/79	790024	2	22:15	5	15		3	3	0	10.5	64 AGE 0
												18 SMELT
	MAY 28/79	790025	2	23:36	15	15		3	3	0	11.5	10 AGE 0
												16 SMELT
	MAY 29/79	790026	3	00:50	20	07		3	3	0	10.5	65 AGE 0
												4 SCULPIN
												24 SMELT
	MAY 29/79	790027	3	02:40	10	07		3	0	0	10.5	4 AGE 0
												23 SMELT
												45 STICKLEBACK
	MAY 31/79	790028	1	21:10	10	15		1	3	0	9.5	27 AGE 0
												36 SMELT
	MAY 31/79	790029	2	22:04	5	15		4	3	7	12.5	67 AGE 0
												42 SMELT
	JUN 1/79	790030	3	00:05	5	15		4	3	7	14.0	100 AGE 0
												9 SMELT
	JUN 1/79	790031	3	00:20	15	15		4	3	7	14.0	56 AGE 0
												26 SMELT
7906	JUN 7/79	790032	1	21:50	10	15		1	5	0	13.0	7 AGE 0
												58 SMELT
	JUN 7/79	790033	2	22:45	5	07		1	5	0	12.5	4 AGE 0
												30 SMELT
	JUN 7/79	790034	2	23:08	15	15		1	5	0	12.5	56 AGE 0
												61 SMELT
	JUN 8/79	790035	3	00:30	5	07		1	5	0	12.5	6 AGE 0
												7 SMELT
	JUN 8/79	790036	3	00:45	15	22		1	5	0	12.5	53 AGE 0
												6 SMELT
7907	JUN 13/79	790037	1	21:47	10	15		1	3	0	13.0	12 AGE 0
												60 SMELT
	JUN 13/79	790038	2	22:41	10	15		3	3	0	14.0	16 AGE 0
												29 SMELT
	JUN 14/79	790039	3	01:40	20	15		2	4	8	13.0	8 AGE 0
												1 SCULPIN
												6 SMELT
												4 STICKLEBACK
7908	JUN 18/79	790040	1	21:20	5	15		3	3	3	12.5	3 AGE 0
												44 SMELT
	JUN 18/79	790041	2	22:10	5	07		3	3	0	13.0	7 AGE 0
												1 OTHER
												75 SMELT
7909	JUN 28/79	790042	1	22:00	5	07		1	4	0	14.5	49 SMELT
	JUN 28/79	790043	2	22:45	20	15		1	4	0	12.0	6 AGE 0
												23 SMELT

Table 13a - Tow summary for Pitt Lake

SURVEY #	SAMPLE DATE	TOW	AREA	SAMPLE TIME	DURATION (min)	DEPTH (m)	SKY CODE	LIGHT CODE	WIND DIR		SURFACE TEMP (C)	CATCH
	JUN 28/79	790044	2	23:45	10	18		1	4	0	18.0	61 AGE 0 17 SMELT
	JUN 29/79	790045	3	02:00	20	15		1	2	4	16.0	2 AGE 0 1 SCULPIN 2 SMELT 5 STICKLEBACK
7910	JUL 4/79	790046	1	21:45	5	15		3	3	0	14.0	3 AGE 0 29 SMELT
	JUL 4/79	790047	2	22:30	10	15		3	3	0	13.0	14 AGE 0 6 SMELT 1 STICKLEBACK
	JUL 4/79	790048	3	24:00	5	15		3	3	0	14.0	3 AGE 0
	JUL 5/79	790049	3	01:15	10	15		3	3	0	14.0	39 AGE 0 34 SMELT 10 STICKLEBACK
7911	JUL 12/79	790050	3	23:20	20	20		1	4	0	14.5	1 AGE 0 9 SMELT
	JUL 13/79	790051	2	00:45	20	15		1	4	0	14.0	37 AGE 0 11 SMELT 10 STICKLEBACK
	JUL 13/79	790052	1	02:00	10	15		1	4	7	13.5	1 AGE 0 1 SCULPIN 27 SMELT 1 STICKLEBACK
7912	JUL 17/79	790053	1	21:55	15	15		1	3	0	14.0	14 AGE 0 42 SMELT 1 STICKLEBACK
	JUL 17/79	790054	2	23:11	10	07		1	3	7	19.0	1 AGE 0 6 SMELT 6 STICKLEBACK
	JUL 18/79	790055	3	01:10	20	15		1	3	0	18.0	12 AGE 0 16 SMELT 2 STICKLEBACK
	JUL 18/79	790056	3	02:45	5	07		1	3	0	18.0	29 SMELT 20 STICKLEBACK
7913	JUL 23/79	790057	1	22:13	10	15		1	3	0	17.5	59 AGE 0 99 SMELT 1 STICKLEBACK

Table 13a - Tow summary for Pitt Lake

SURVEY #	SAMPLE DATE	TOW	AREA	SAMPLE TIME	DURATION (min)	DEPTH (m)	SKY CODE	LIGHT CODE	WIND DIR		SURFACE TEMP (C)	CATCH
7913	JUL 23/79	790058	2	23:08	10	15		1	3	0	18.5	34 AGE 0
												17 SMELT
												1 STICKLEBACK
	JUL 23/79	790059	2	23:58	10	15		1	3	0	18.5	20 AGE 0
												21 SMELT
												21 STICKLEBACK
	JUL 24/79	790060	3	01:56	10	07		1	3	0	16.5	4 AGE 0
												3 SMELT
												139 STICKLEBACK
7915	JUL 30/79	790064	1	21:20	15	15		1	3	4	17.0	12 AGE 0
												2 AGE 1
												32 SMELT
												1 STICKLEBACK
	JUL 30/79	790065	2	22:15	10	22		1	3	0	19.0	13 AGE 0
												14 SMELT
	JUL 30/79	790066	2	22:45	5	07		1	3	0	19.0	3 AGE 0
												26 SMELT
	JUL 31/79	790067	3	01:55	10	10		1	3	0	18.5	5 AGE 0
												15 SMELT
												69 STICKLEBACK
7918	AUG 23/79	790094	1	21:20	10	22		3	3	4	18.0	11 AGE 0
												70 SMELT
	AUG 23/79	790095	2	22:20	10	22		1	3	3	18.5	7 AGE 0
												1 SCULPIN
												48 SMELT
												2 STICKLEBACK
	AUG 23/79	790096	2	23:17	10	22		1	2	0	19.5	11 AGE 0
												85 SMELT
												2 STICKLEBACK
	AUG 24/79	790097	3	01:00	5	15		1	2	0	17.5	1 AGE 0
												71 STICKLEBACK
7919	SEP 5/79	790098	1	20:05	5	22		3	2	0	13.5	15 AGE 0
												111 SMELT
												1 STICKLEBACK
	SEP 5/79	790099	2	21:30	10	22		3	4	6	15.5	3 AGE 0
												40 SMELT
												28 STICKLEBACK
	SEP 5/79	790100	3	23:09	2	15		3	4	7	15.0	44 SMELT
												182 STICKLEBACK

Table 13a - Tow summary for Pitt Lake

SURVEY #	SAMPLE DATE	TOW	AREA	SAMPLE TIME	DURATION (min)	DEPTH (m)	SKY CODE	LIGHT CODE	WIND DIR	SURFACE TEMP (C)	CATCH
7920	SEP 19/79	790101	1	20:00	15	22	4	3	0	14.5	36 AGE 0
											116 SMELT
											4 STICKLEBACK
	SEP 19/79	790102	2	21:29	10	22	4	3	0	17.0	9 AGE 0
											19 SMELT
											213 STICKLEBACK
	SEP 19/79	790103	3	23:05	10	15	4	3	0	15.0	2 AGE 0
											2 OTHER
											15 SMELT
											114 STICKLEBACK
7923	NOV 19/79	790119	1	18:15	5	15	1	3	0	7.5	118 SMELT
											13 STICKLEBACK
	NOV 19/79	790120	2	19:05	20	44	3	3	0	7.0	6 AGE 0
											80 SMELT
											82 STICKLEBACK
	NOV 19/79	790121	3	20:45	1	07	3	3	0	7.5	28 SMELT
											126 STICKLEBACK
	NOV 19/79	790122	3	21:10	20	37	3	3	0	7.5	10 AGE 0
											37 SMELT
											54 STICKLEBACK
8002	FEB 27/80	800004	1	20:05	5	22	6	3	0	3.5	3 AGE 0
											50 SMELT
8003	MAR 3/80	800005	2	19:20	20	52	5	3	0	5.0	4 AGE 1
											96 SMELT
											1 WHITEFISH
	MAR 3/80	800006	2	20:20	10	15	5	3	0	5.0	2 SMELT
	MAR 3/80	800007	2	21:00	10	15	5	3	0	4.5	3 AGE 0
											2 AGE 1
											50 SMELT
	MAR 4/80	800009	3	02:00	20	52	5	3	0	5.0	8 AGE 1
											52 SMELT
											1 STICKLEBACK
8006	JUL 17/80	800024	3	22:25	10	07	1	3	0	16.5	3 AGE 0
											10 SMELT
											5 STICKLEBACK
	JUL 17/80	800025	2	23:50	15	15	1	3	0	17.0	16 AGE 0
											42 SMELT
											2 STICKLEBACK
	JUL 17/80	800026	2	00:25	10	07	1	3	0	17.0	3 AGE 0
											12 SMELT
											3 STICKLEBACK
	JUL 18/80	800027	1	02:15	5	07	1	3	0	14.5	55 SMELT
8011	SEP 10/80	800041	1	19:35	10	22	1	3	0	15.0	16 AGE 0
											34 SMELT

Table 13a - Tow summary for Pitt Lake

SURVEY #	SAMPLE DATE	TOW	AREA	SAMPLE TIME	DURATION (min)	DEPTH (m)	SKY CODE	LIGHT CODE	WIND DIR		SURFACE TEMP (C)	CATCH
												413 STICKLEBACK
	SEP 10/80	800042	2	20:31	5	15		1	3	0	15.5	6 AGE 0
												18 SMELT
												126 STICKLEBACK
	SEP 10/80	800043	3	21:45	10	22		1	3	0	16.0	2 AGE 0
												11 SMELT
												159 STICKLEBACK
	SEP 10/80	800044	3	22:10	3	07		1	3	0	16.0	35 SMELT
												156 STICKLEBACK
8013	OCT 6/80	800049	1	18:50	5	15		1	3	0	13.0	38 SMELT
												141 STICKLEBACK
	OCT 6/80	800050	2	20:00	20	30		1	3	5	14.5	13 AGE 0
												18 SMELT
												75 STICKLEBACK
	OCT 6/80	800051	2	20:30	3	15		1	3	5	14.5	11 SMELT
												126 STICKLEBACK
	OCT 6/80	800052	3	22:30	3	15		1	3	0	14.5	1 SCULPIN
												23 SMELT
												183 STICKLEBACK
8104	JUN 11/81	810007	1	21:56	10	07		2	4	0	11.5	27 SMELT
	JUN 11/81	810008	2	23:03	10	07		2	4	0	14.0	24 SMELT
	JUN 12/81	810009	3	1:03	15	07		2	4	0		7 SMELT
												7 STICKLEBACK
8112	SEP 16/81	810034	3	20:30	1	13		1	3	0	18.0	11 SMELT
												186 STICKLEBACK
	SEP 16/81	810035	2	22:50	2	19		1	5	0	17.0	1 AGE 1
												123 SMELT
												49 STICKLEBACK
	SEP 16/81	810036	1	23:30	1	19		1	5	0	16.5	145 SMELT
												632 STICKLEBACK
8203	JUL 6/82	820007	1	21:40	2	07		1	2	0	13.0	1 AGE 0
												45 SMELT
	JUL 6/82	820008	2	23:00	10	07		3	3	0	13.0	2 AGE 0
												21 SMELT
	JUL 6/82	820009	3	00:50	5	07		3	3	0	12.0	3 AGE 0
												58 SMELT

Table 13b - Trawl statistics by survey for Pitt Lake

SURVEY#	DATES	CATCH		LENGTH (mm)					WEIGHT (g)				
		SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
7719	OCT 5/77	AGE 0	25	72.88	87	65	4.78	22.83	4.63	8.93	2.98	1.14	1.30
		SMELT	347	39.78	128	23	16.57	274.64	0.74	18.44	0.01	1.44	2.09
		STICKLEBACK	738	34.94	51	23	7.03	49.41	0.50	1.45	0.12	0.32	0.10
7804	APR 12-14/78	AGE 0	82	29.34	32	26	1.18	1.40	0.26	0.35	0.10	0.04	0.00
		AGE 1	57	72.72	115	60	8.03	64.55	4.06	19.25	2.04	2.27	5.17
		SCULPIN	1	37.00	37	37	0.00	0.00	0.46	0.46	0.46	0.00	0.00
		SMELT	399	45.23	121	26	12.98	168.55	0.76	12.59	0.03	0.93	0.87
		STICKLEBACK	85	37.39	63	27	6.59	43.37	0.61	2.58	0.23	0.36	0.13
7805	MAY 1-3/78	AGE 0	1050	28.88	34	22	1.32	1.75	0.24	0.46	0.13	0.03	0.00
		AGE 1	27	73.07	82	67	3.42	11.70	3.97	5.76	2.88	0.55	0.30
		SCULPIN	1	34.00	34	34	0.00	0.00	0.37	0.37	0.37	0.00	0.00
		SMELT	337	49.96	123	28	14.80	218.93	1.07	15.35	0.04	1.33	1.77
		STICKLEBACK	2	29.50	38	21	8.50	72.25	0.38	0.56	0.20	0.18	0.03
7807	JUN 8-9/78	AGE 0	5	30.80	32	30	0.98	0.96	0.26	0.35	0.21	0.05	0.00
		AGE 1	2	64.00	68	60	4.00	16.00	2.65	3.14	2.16	0.49	0.24
		OTHER	1	50.00	50	50	0.00	0.00	1.49	1.49	1.49	0.00	0.00
		SMELT	232	54.02	125	26	16.79	281.77	1.45	17.89	0.04	1.87	3.51
7809	JUN 27-28/78	AGE 0	6	38.33	49	28	7.93	62.89	0.77	1.50	0.16	0.48	0.23
		SMELT	349	48.42	123	18	15.28	233.53	1.11	15.84	0.00	1.41	1.99
		STICKLEBACK	13	43.85	49	38	3.76	14.13	0.97	1.50	0.68	0.28	0.08
7813	AUG 3-4/78	AGE 0	15	71.00	95	48	13.51	182.40	5.17	11.12	1.26	2.88	8.32
		AGE 1	1	130.00	130	130	0.00	0.00	32.69	32.69	32.69	0.00	0.00
		SCULPIN	2	63.50	110	17	46.50	2162.25	9.17	18.07	0.27	8.90	79.21
		SMELT	589	45.11	104	17	16.95	287.23	0.96	9.31	0.01	1.06	1.13
		STICKLEBACK	416	27.15	53	13	7.28	52.94	0.27	1.50	0.02	0.31	0.10
7828	NOV 22/78	AGE 0	7	85.29	93	74	5.95	35.35	7.08	9.10	4.52	1.49	2.21
		AGE 1	1	132.00	132	132	0.00	0.00	35.16	35.16	35.16	0.00	0.00
		SCULPIN	2	30.00	32	28	2.00	4.00	0.41	0.54	0.29	0.13	0.02

Table 13b - Trawl statistics by survey for Pitt Lake

SURVEY#	DATES	CATCH		LENGTH (mm)					WEIGHT (g)				
		SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
		SMELT	192	52.75	136	22	21.77	473.78	1.72	21.61	0.02	2.60	6.75
		STICKLEBACK	395	29.51	51	19	5.37	28.86	0.28	1.31	0.02	0.19	0.04
7901	APR 25-MAY 1/79	AGE 0	264	28.32	49	24	1.89	3.57	0.23	0.87	0.09	0.05	0.00
		AGE 1	6	83.17	94	72	6.91	47.81	6.12	8.63	4.63	1.35	1.82
		OTHER	1	79.00	79	79	0.00	0.00	6.04	6.04	6.04	0.00	0.00
		SCULPIN	1	35.00	35	35	0.00	0.00	0.45	0.45	0.45	0.00	0.00
		SMELT	311	58.68	133	26	16.03	256.83	1.83	18.87	0.06	1.82	3.31
		STICKLEBACK	797	31.10	51	22	3.28	10.74	0.31	1.07	0.09	0.10	0.01
7902	MAY 7-8/79	AGE 0	102	28.17	39	25	1.93	3.71	0.32	0.42	0.19	0.05	0.00
		AGE 1	1	90.00	90	90	0.00	0.00	8.83	8.83	8.83	0.00	0.00
		OTHER	1	89.00	89	89	0.00	0.00	8.68	8.68	8.68	0.00	0.00
		SCULPIN	1	33.00	33	33	0.00	0.00	0.47	0.47	0.47	0.00	0.00
		SMELT	108	59.44	113	25	16.56	274.14	1.99	12.07	0.05	1.95	3.80
		STICKLEBACK	44	31.36	38	25	3.07	9.41	0.34	0.62	0.17	0.09	0.00
7903	MAY 14-15/79	AGE 0	365	28.87	32	25	1.09	1.19	0.22	0.30	0.14	0.03	0.00
		AGE 1	3	86.33	93	82	4.78	22.89	6.48	8.08	5.56	1.13	1.29
		SMELT	279	60.65	104	28	12.57	158.12	1.73	9.41	0.08	1.29	1.67
		WHITEFISH	1	116.00	116	116	0.00	0.00	16.65	16.65	16.65	0.00	0.00
7904	MAY 23-24/79	AGE 0	232	29.35	32	19	1.21	1.46	0.22	0.30	0.13	0.03	0.00
		AGE 1	1	98.00	98	98	0.00	0.00	10.83	10.83	10.83	0.00	0.00
		SMELT	95	50.91	90	29	11.62	134.92	1.05	6.32	0.06	0.85	0.72
7905	MAY 28-JUN 1/79	AGE 0	415	29.80	53	25	2.28	5.19	0.27	1.67	0.15	0.11	0.01
		SCULPIN	4	33.50	41	30	4.39	19.25	0.47	0.78	0.34	0.18	0.03
		SMELT	212	53.28	139	26	17.70	313.23	1.58	19.64	0.07	2.34	5.46
		STICKLEBACK	45	35.82	42	29	2.52	6.37	0.53	0.76	0.29	0.11	0.01
7906	JUN 7-8/79	AGE 0	126	30.16	37	26	2.17	4.69	0.27	0.59	0.15	0.08	0.01

Table 13b - Trawl statistics by survey for Pitt Lake

SURVEY#	DATES	CATCH SPECIES	CATCH N	LENGTH (mm) MEAN	LENGTH (mm) MAX	LENGTH (mm) MIN	LENGTH (mm) S.D.	LENGTH (mm) VAR	WEIGHT (g) MEAN	WEIGHT (g) MAX	WEIGHT (g) MIN	WEIGHT (g) S.D.	WEIGHT (g) VAR
		SMELT	162	50.20	100	27	17.46	305.02	1.28	7.81	0.06	1.42	2.01
7907	JUN 13-14/79	AGE 0	36	31.06	47	26	4.19	17.55	0.32	1.30	0.16	0.23	0.05
		SCULPIN	1	45.00	45	45	0.00	0.00	1.18	1.18	1.18	0.00	0.00
		SMELT	95	58.19	99	32	12.77	162.97	1.67	7.28	0.17	1.14	1.30
		STICKLEBACK	4	39.25	42	36	2.38	5.69	0.70	0.81	0.57	0.09	0.00
7908	JUN 18/79	AGE 0	10	30.80	42	27	3.94	15.56	0.30	0.84	0.17	0.19	0.03
		OTHER	1	62.00	62	62	0.00	0.00	2.67	2.67	2.67	0.00	0.00
		SMELT	119	52.56	132	30	17.77	315.81	1.57	20.50	0.12	3.16	9.98
7909	JUN 28-29/79	AGE 0	69	41.28	57	27	6.74	45.45	0.97	2.73	0.19	0.50	0.25
		SCULPIN	1	39.00	39	39	0.00	0.00	0.84	0.84	0.84	0.00	0.00
		SMELT	91	61.37	118	30	16.15	260.67	2.21	12.76	0.10	2.12	4.49
		STICKLEBACK	5	38.80	42	33	3.37	11.36	0.66	0.78	0.42	0.13	0.02
7910	JUL 4-5/79	AGE 0	59	44.86	63	32	6.81	46.35	1.17	3.10	0.36	0.59	0.34
		SMELT	69	55.54	87	32	11.12	123.55	1.43	4.97	0.11	0.87	0.75
		STICKLEBACK	11	41.09	46	37	2.11	4.45	0.77	0.95	0.55	0.11	0.01
7911	JUL 12-13/79	AGE 0	39	51.28	65	39	7.03	49.38	1.73	3.54	0.71	0.72	0.52
		SCULPIN	1	41.00	41	41	0.00	0.00	0.80	0.80	0.80	0.00	0.00
		SMELT	47	58.83	131	33	19.26	370.78	2.13	17.45	0.23	3.11	9.65
		STICKLEBACK	11	41.45	45	38	2.39	5.70	0.77	0.99	0.55	0.13	0.02
7912	JUL 17-18/79	AGE 0	27	56.81	78	40	9.25	85.63	2.70	7.60	0.79	1.59	2.52
		SMELT	93	64.23	138	40	14.92	222.52	2.38	23.08	0.39	2.93	8.59
		STICKLEBACK	29	39.69	48	20	6.37	40.63	0.76	1.30	0.09	0.28	0.08
7913	JUL 23-24/79	AGE 0	117	61.97	78	39	7.35	54.08	3.00	6.76	0.34	1.15	1.32
		SMELT	140	67.06	135	27	15.59	243.09	2.52	15.43	0.07	2.39	5.71
		STICKLEBACK	162	41.48	48	20	3.84	14.78	0.89	1.53	0.08	0.21	0.05

Table 13b - Trawl statistics by survey for Pitt Lake

SURVEY#	DATES	CATCH		LENGTH (mm)					WEIGHT (g)				
		SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
7915	JUL 30-31/79	AGE 0	33	65.36	82	49	8.13	66.11	3.54	7.05	1.24	1.39	1.93
		AGE 1	2	119.00	120	118	1.00	1.00	21.20	21.50	20.90	0.30	0.09
		SMELT	87	56.90	125	19	18.75	351.50	1.90	18.50	0.03	2.22	4.91
		STICKLEBACK	70	38.64	47	21	7.05	49.74	0.77	1.49	0.07	0.32	0.11
7918	AUG 23-24/79	AGE 0	30	70.37	87	50	7.45	55.43	4.59	9.42	1.47	1.64	2.69
		SCULPIN	2	32.50	37	28	4.50	20.25	0.38	0.51	0.26	0.13	0.02
		SMELT	210	41.16	141	20	21.67	469.38	1.05	27.00	0.01	2.52	6.37
		STICKLEBACK	75	36.16	51	22	8.70	75.63	0.66	1.62	0.09	0.43	0.18
7919	SEP 5/79	AGE 0	18	71.44	85	60	5.85	34.25	4.83	7.58	2.57	1.26	1.59
		SMELT	195	35.07	120	20	15.52	240.74	0.53	15.99	0.01	1.35	1.82
		STICKLEBACK	211	34.66	52	20	8.37	70.08	0.53	1.59	0.09	0.38	0.14
7920	SEP 19/79	AGE 0	47	72.49	83	59	6.06	36.76	4.62	6.71	2.48	1.18	1.39
		OTHER	2	71.50	113	30	41.50	1722.25	7.55	14.75	0.35	7.20	51.84
		SMELT	150	38.85	100	19	17.66	311.82	0.67	7.07	0.02	1.12	1.24
		STICKLEBACK	331	36.57	55	19	8.04	64.69	0.63	1.72	0.08	0.34	0.12
7923	NOV 19/79	AGE 0	16	75.69	87	67	5.01	25.09	5.08	7.71	3.32	1.13	1.27
		SMELT	263	39.99	135	22	16.57	274.54	0.76	15.21	0.01	1.64	2.70
		STICKLEBACK	275	35.94	49	21	7.16	51.25	0.55	1.27	0.12	0.29	0.08
8002	FEB 27/80	AGE 0	3	28.00	30	26	1.63	2.67	0.20	0.24	0.16	0.03	0.00
		SMELT	50	43.28	108	26	19.38	375.52	1.11	10.70	0.03	2.23	4.98
8003	MAR 3-4/80	AGE 0	3	28.33	29	28	0.47	0.22	0.26	0.27	0.24	0.01	0.00
		AGE 1	14	75.07	82	61	6.99	48.92	4.65	7.32	2.33	1.36	1.84
		SMELT	200	51.24	79	25	17.61	310.15	1.39	4.63	0.03	1.36	1.85
		STICKLEBACK	1	30.00	30	30	0.00	0.00	0.30	0.30	0.30	0.00	0.00
		WHITEFISH	1	52.00	52	52	0.00	0.00	1.30	1.30	1.30	0.00	0.00

Table 13b - Trawl statistics by survey for Pitt Lake

SURVEY#	DATES	CATCH		LENGTH (mm)					WEIGHT (g)				
		SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
8006	JUL 17-18/80	AGE 0	22	60.36	68	53	4.07	16.60	2.85	4.22	1.78	0.66	0.44
		SMELT	119	50.64	120	22	14.16	200.62	1.25	14.25	0.02	1.59	2.52
		STICKLEBACK	10	45.60	54	39	4.88	23.84	1.11	1.85	0.63	0.45	0.20
8011	SEP 10/80	AGE 0	24	86.79	96	75	5.25	27.58	9.08	12.17	5.57	1.63	2.64
		SMELT	98	43.33	100	14	18.71	349.93	0.82	6.81	0.01	1.08	1.16
		STICKLEBACK	854	29.24	53	15	5.27	27.80	0.33	2.00	0.05	0.25	0.06
8013	OCT 6/80	AGE 0	13	87.69	100	74	6.12	37.44	8.51	12.95	4.49	2.11	4.46
		SCULPIN	1	30.00	30	30	0.00	0.00	0.32	0.32	0.32	0.00	0.00
		SMELT	90	51.12	120	21	18.80	353.26	1.36	12.20	0.01	1.76	3.10
		STICKLEBACK	525	30.33	59	19	6.61	43.63	0.34	2.77	0.07	0.31	0.10
8104	JUN 11-12/81	SMELT	58	56.78	123	28	15.39	236.90	1.80	17.60	0.04	2.35	5.54
		STICKLEBACK	7	38.86	42	37	1.64	2.69	0.58	0.82	0.49	0.11	0.01
8112	SEP 16/81	AGE 1	1	97.00	97	97	0.00	0.00	13.65	13.65	13.65	0.00	0.00
		SMELT	279	28.84	118	21	6.65	44.27	0.14	11.72	0.01	0.71	0.51
		STICKLEBACK	867	38.71	70	13	7.85	61.65	0.79	2.46	0.07	0.40	0.16
8203	JUL 6/82	AGE 0	6	51.33	63	29	10.80	116.56	1.86	3.16	0.23	0.95	0.90
		SMELT	124	47.16	115	20	15.11	228.36	1.07	16.13	0.01	1.73	3.00
		STICKLEBACK	3	47.67	48	47	0.47	0.22	0.79	1.17	0.10	0.49	0.24

Table 13c - Trawl statistics by tow for Pitt Lake

TRAWL					CATCH		LENGTH (mm)					WEIGHT (g)				
AREA	DATE	TOW	DEPTH (m)	DURATION (min)	SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
SURVEY # 7719																
1	OCT 5/77	770047	33	30	AGE 0	21	73.24	87	65	4.98	24.75	4.66	8.93	2.98	1.22	1.50
					SMELT	142	38.76	83	24	15.84	250.93	0.62	4.18	0.02	1.03	1.06
					STICKLEBACK	32	39.31	50	28	6.74	45.40	0.68	1.21	0.21	0.33	0.11
1	OCT 5/77	770048	15	5	SMELT	102	45.70	128	25	18.95	359.17	1.21	18.44	0.01	2.13	4.53
					STICKLEBACK	219	39.17	50	24	6.92	47.82	0.70	1.25	0.13	0.31	0.09
3	OCT 5/77	770049	35	3	AGE 0	3	69.67	72	67	2.05	4.22	4.36	4.90	3.63	0.53	0.29
					SMELT	44	31.86	66	23	8.48	71.94	0.28	2.49	0.05	0.43	0.19
					STICKLEBACK	249	33.42	50	23	6.46	41.78	0.44	1.44	0.12	0.31	0.10
3	OCT 5/77	770050	10		AGE 0	1	75.00	75	75	0.00	0.00	4.65	4.65	4.65	0.00	0.00
					SMELT	59	37.93	94	25	14.95	223.55	0.57	6.71	0.04	1.08	1.16
					STICKLEBACK	238	32.06	51	24	5.45	29.68	0.36	1.45	0.12	0.23	0.05
SURVEY # 7804																
1	APR 12/78	780006	20	5	AGE 0	40	29.30	32	27	1.14	1.31	0.25	0.30	0.18	0.03	0.00
					AGE 1	5	88.40	115	75	16.04	257.44	8.42	19.25	4.13	5.77	33.30
					SCULPIN	1	37.00	37	37	0.00	0.00	0.46	0.46	0.46	0.00	0.00
					SMELT	74	47.74	89	28	13.58	184.54	0.91	5.13	0.11	0.86	0.74
					STICKLEBACK	1	43.00	43	43	0.00	0.00	0.95	0.95	0.95	0.00	0.00
2	APR 12/78	780007	11	5	AGE 1	1	82.00	82	82	0.00	0.00	5.11	5.11	5.11	0.00	0.00
					SMELT	62	44.98	121	26	15.48	239.76	0.82	12.59	0.03	1.64	2.68
					STICKLEBACK	9	37.00	45	32	4.62	21.33	0.53	0.93	0.32	0.22	0.05
2	APR 12/78	780008	36	10	AGE 0	4	30.00	32	29	1.22	1.50	0.28	0.33	0.25	0.03	0.00
					AGE 1	33	70.85	79	61	4.10	16.80	3.58	5.08	2.31	0.64	0.41
					SMELT	67	48.33	71	30	11.10	123.30	0.83	3.15	0.11	0.61	0.37
					STICKLEBACK	4	35.25	40	33	2.77	7.69	0.43	0.53	0.36	0.07	0.00
3	APR 13/78	780009	10	5	AGE 1	1	77.00	77	77	0.00	0.00	4.28	4.28	4.28	0.00	0.00
					SMELT	18	55.67	72	32	10.77	115.89	1.29	2.92	0.17	0.69	0.48
					STICKLEBACK	65	37.62	48	29	6.16	37.90	0.61	1.24	0.27	0.30	0.09

Table 13c - Trawl statistics by tow for Pitt Lake

TRAWL					CATCH		LENGTH (mm)					WEIGHT (g)				
AREA	DATE	TOW	DEPTH (m)	DURATION (min)	SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
2	APR 13/78	780010	30	10	SMELT	21	36.71	50	29	4.78	22.87	0.28	0.74	0.09	0.14	0.02
					STICKLEBACK	5	35.80	63	27	13.66	186.56	0.74	2.58	0.23	0.92	0.85
2	MAY 13/78	780011	40	20	SMELT	19	39.32	70	30	9.30	86.43	0.41	2.69	0.10	0.59	0.34
2	APR 13/78	780012	20	10	AGE 0	16	29.31	31	28	1.04	1.09	0.26	0.31	0.21	0.02	0.00
					AGE 1	3	68.33	73	60	5.91	34.89	3.06	3.65	2.04	0.72	0.52
					SMELT	30	41.60	70	27	13.26	175.77	0.62	2.24	0.07	0.70	0.49
2	APR 13/78	780013	40	7	AGE 0	19	29.47	31	27	1.14	1.30	0.28	0.35	0.22	0.03	0.00
					AGE 1	14	71.50	77	64	3.83	14.68	3.75	4.79	2.78	0.59	0.35
					SMELT	51	41.06	71	27	10.02	100.45	0.57	2.77	0.13	0.57	0.33
2	APR 14/78	780014	10	5	AGE 0	3	28.33	30	26	1.70	2.89	0.18	0.22	0.10	0.05	0.00
					SMELT	56	45.73	82	29	12.64	159.87	0.74	3.83	0.03	0.79	0.63
					STICKLEBACK	1	37.00	37	37	0.00	0.00	0.44	0.44	0.44	0.00	0.00
2	APR 14/78	780015	10	10	SMELT	1	64.00	64	64	0.00	0.00	1.84	1.84	1.84	0.00	0.00
SURVEY # 7805																
1	MAY 1/78	780016	15	5	AGE 0	41	28.98	30	26	1.00	1.00	0.24	0.30	0.14	0.03	0.00
					AGE 1	1	76.00	76	76	0.00	0.00	4.77	4.77	4.77	0.00	0.00
					SMELT	196	53.42	123	30	14.95	223.39	1.29	15.35	0.10	1.52	2.30
					STICKLEBACK	1	38.00	38	38	0.00	0.00	0.56	0.56	0.56	0.00	0.00
2	MAY 1/78	780017	15	5	AGE 0	18	28.83	30	26	1.21	1.47	0.23	0.29	0.18	0.03	0.00
					AGE 1	2	71.50	76	67	4.50	20.25	3.80	4.42	3.17	0.63	0.39
					SCULPIN	1	34.00	34	34	0.00	0.00	0.37	0.37	0.37	0.00	0.00
					SMELT	10	39.10	57	28	8.61	74.09	0.41	1.27	0.09	0.38	0.14
3	MAY 2/78	780018	10	20	AGE 1	3	76.33	82	71	4.50	20.22	4.58	5.76	3.72	0.86	0.74
					SMELT	28	48.54	68	31	12.25	149.96	0.94	2.52	0.10	0.70	0.49
					STICKLEBACK	1	21.00	21	21	0.00	0.00	0.20	0.20	0.20	0.00	0.00
2	MAY 2/78	780019	32	20	SMELT	4	41.75	57	34	8.98	80.69	0.46	1.20	0.16	0.43	0.18
2	MAY 2/78	780020	40	15	AGE 0	522	28.61	32	25	1.23	1.50	0.24	0.32	0.13	0.03	0.00
					SMELT	11	48.09	92	28	18.26	333.54	1.14	5.91	0.04	1.63	2.67

Table 13c - Trawl statistics by tow for Pitt Lake

TRAWL					CATCH		LENGTH (mm)					WEIGHT (g)				
AREA	DATE	TOW	DEPTH (m)	DURATION (min)	SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
2	MAY 2/78	780021	20	10	AGE 0	205	28.67	34	25	1.34	1.79	0.24	0.46	0.16	0.03	0.00
					AGE 1	13	72.00	75	67	2.32	5.38	3.83	4.53	2.88	0.41	0.17
					SMELT	39	48.26	93	28	15.30	234.09	0.99	6.04	0.07	1.17	1.36
2	MAY 3/78	780022	25	5	AGE 0	264	29.57	33	22	1.30	1.69	0.25	0.35	0.15	0.03	0.00
					AGE 1	8	73.63	80	70	3.20	10.23	3.92	4.42	3.47	0.34	0.11
					SMELT	49	41.61	75	30	9.60	92.07	0.50	3.19	0.08	0.58	0.34
SURVEY # 7807																
2	JUN 8/78	780025	12	5	SMELT	26	65.23	89	37	10.20	104.10	2.10	5.56	0.27	0.98	0.97
1	JUN 8/78	780026	10	5	AGE 0	2	31.00	32	30	1.00	1.00	0.25	0.28	0.23	0.03	0.00
					AGE 1	1	60.00	60	60	0.00	0.00	2.16	2.16	2.16	0.00	0.00
					OTHER	1	50.00	50	50	0.00	0.00	1.49	1.49	1.49	0.00	0.00
					SMELT	55	50.85	125	28	18.02	324.74	1.44	17.89	0.10	2.42	5.85
2	JUN 8/78	780027	07	5	AGE 1	1	68.00	68	68	0.00	0.00	3.14	3.14	3.14	0.00	0.00
					SMELT	94	58.11	121	32	16.45	270.69	1.68	14.10	0.13	2.03	4.13
3	JUN 9/78	780028	07	5	AGE 0	3	30.67	32	30	0.94	0.89	0.26	0.35	0.21	0.06	0.00
					SMELT	57	45.21	90	26	12.94	167.46	0.79	3.89	0.04	0.81	0.66
SURVEY # 7809																
2	JUN 27/78	780035	10	10	AGE 0	2	28.00	28	28	0.00	0.00	0.20	0.25	0.16	0.05	0.00
					SMELT	51	39.37	65	18	14.35	205.88	0.57	2.27	0.00	0.60	0.36
2	JUN 27/78	780036	25	10	SMELT	16	46.94	71	20	17.13	293.31	1.03	2.84	0.03	0.92	0.84
1	JUN 27/78	780037	08	5	SMELT	147	47.55	85	18	12.55	157.61	0.95	5.24	0.02	0.86	0.73
2	JUN 27/78	780038	06	5	SMELT	74	51.97	123	21	16.24	263.73	1.43	15.84	0.02	2.02	4.07
3	JUN 28/78	780039	08	10	AGE 0	4	43.50	49	40	3.77	14.25	1.05	1.50	0.70	0.32	0.10
					SMELT	21	55.90	79	23	13.04	170.09	1.51	3.37	0.04	0.86	0.74
					STICKLEBACK	13	43.85	49	38	3.76	14.13	0.97	1.50	0.68	0.28	0.08
2	JUN 28/78	780040	10	10	SMELT	40	53.25	116	24	17.81	317.19	1.59	11.92	0.03	2.23	4.99

Table 13c - Trawl statistics by tow for Pitt Lake

TRAWL					CATCH		LENGTH (mm)					WEIGHT (g)				
AREA	DATE	TOW	DEPTH (m)	DURATION (min)	SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
SURVEY # 7813																
2	AUG 3/78	780061	10	10	SCULPIN	1	17.00	17	17	0.00	0.00	0.27	0.27	0.27	0.00	0.00
					SMELT	65	55.55	93	24	16.06	258.03	1.72	6.46	0.03	1.20	1.44
					STICKLEBACK	2	28.50	29	28	0.50	0.25	0.32	0.37	0.27	0.05	0.00
1	AUG 3/78	780062	08	10	AGE 0	3	80.67	84	79	2.36	5.56	7.10	8.23	6.00	0.91	0.83
					AGE 1	1	130.00	130	130	0.00	0.00	32.69	32.69	32.69	0.00	0.00
					SMELT	100	45.80	96	17	18.44	340.00	0.98	6.97	0.01	1.13	1.27
					STICKLEBACK	1	18.00	18	18	0.00	0.00	0.06	0.06	0.06	0.00	0.00
2	AUG 3/78	780063	20	10	AGE 0	4	73.75	86	67	7.29	53.19	5.66	9.09	3.95	2.02	4.09
					SMELT	222	44.66	93	18	15.57	242.37	0.84	6.28	0.01	0.85	0.73
					STICKLEBACK	5	34.20	44	17	11.75	138.16	0.56	0.91	0.05	0.39	0.15
2	AUG 3/78	780064	12	5	AGE 0	7	66.14	95	48	16.88	284.98	4.32	11.12	1.26	3.50	12.23
					SCULPIN	1	110.00	110	110	0.00	0.00	18.07	18.07	18.07	0.00	0.00
					SMELT	200	41.70	104	20	16.46	270.92	0.81	9.31	0.02	1.07	1.15
					STICKLEBACK	5	25.20	44	19	9.45	89.36	0.25	0.90	0.08	0.32	0.10
3	AUG 4/78	780065	08	5	AGE 0	1	65.00	65	65	0.00	0.00	3.43	3.43	3.43	0.00	0.00
					SMELT	2	62.00	75	49	13.00	169.00	1.99	3.27	0.70	1.28	1.65
					STICKLEBACK	403	27.10	53	13	7.14	50.94	0.27	1.50	0.02	0.31	0.10
SURVEY # 7828																
2	NOV 22/78	780124	20	10	SMELT	18	50.33	108	22	24.95	622.33	1.56	9.46	0.03	2.38	5.64
					STICKLEBACK	180	30.92	51	21	5.59	31.29	0.33	1.31	0.02	0.21	0.04
1	NOV 22/78	780125	07	10	SMELT	118	54.07	128	25	19.66	386.35	1.72	20.60	0.03	2.20	4.85
					STICKLEBACK	58	28.72	46	19	5.63	31.68	0.28	1.15	0.07	0.19	0.04
2	NOV 22/78	780126	44	20	AGE 0	7	85.29	93	74	5.95	35.35	7.08	9.10	4.52	1.49	2.21
					AGE 1	1	132.00	132	132	0.00	0.00	35.16	35.16	35.16	0.00	0.00
					SMELT	45	53.27	136	25	24.74	611.84	1.99	21.61	0.05	3.61	13.04
					STICKLEBACK	35	30.71	47	24	5.64	31.86	0.31	0.94	0.12	0.21	0.05

Table 13c - Trawl statistics by tow for Pitt Lake

TRAWL					CATCH		LENGTH (mm)					WEIGHT (g)				
AREA	DATE	TOW	DEPTH (m)	DURATION (min)	SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
3	NOV 22/78	780127	12	15	SCULPIN	2	30.00	32	28	2.00	4.00	0.41	0.54	0.29	0.13	0.02
					SMELT	11	40.45	84	24	20.58	423.34	0.91	4.60	0.02	1.52	2.30
					STICKLEBACK	122	27.44	45	20	3.89	15.15	0.21	0.89	0.04	0.12	0.01
SURVEY # 7901																
1	APR 25/79	790001	15	5	AGE 0	18	29.00	31	26	1.29	1.67	0.22	0.26	0.15	0.03	0.00
					SMELT	41	58.17	133	29	18.36	337.02	1.94	18.87	0.08	2.89	8.34
1	APR 25/79	790002	44	20	AGE 0	30	28.60	31	27	0.95	0.91	0.25	0.31	0.21	0.02	0.00
					AGE 1	1	78.00	78	78	0.00	0.00	4.63	4.63	4.63	0.00	0.00
					SCULPIN	1	35.00	35	35	0.00	0.00	0.45	0.45	0.45	0.00	0.00
					SMELT	30	47.63	76	27	13.83	191.23	0.99	3.51	0.08	0.92	0.85
2	APR 26/79	790003	07	5	AGE 0	2	33.00	33	33	0.00	0.00	0.39	0.39	0.39	0.00	0.00
					SMELT	16	59.94	78	35	10.33	106.68	1.58	3.07	0.17	0.70	0.49
					STICKLEBACK	307	31.45	45	22	3.15	9.90	0.30	0.76	0.10	0.09	0.00
2	APR 26/79	790004	30	20	AGE 1	2	86.00	87	85	1.00	1.00	6.40	6.63	6.18	0.23	0.05
					SMELT	15	44.87	75	30	12.25	150.12	0.69	2.93	0.08	0.73	0.53
					STICKLEBACK	137	31.30	39	24	3.03	9.19	0.31	0.56	0.13	0.09	0.00
3	APR 26/79	790005	15	15	SMELT	4	70.00	95	30	24.18	584.50	3.34	6.75	0.11	2.35	5.52
					STICKLEBACK	65	31.25	51	24	3.94	15.54	0.33	1.07	0.16	0.12	0.02
1	APR 30/79	790006	15	5	AGE 0	53	29.23	31	27	0.86	0.74	0.21	0.27	0.09	0.03	0.00
					SMELT	83	62.76	110	35	12.95	167.82	2.08	11.86	0.20	1.69	2.84
1	APR 30/79	790007	37	15	AGE 0	137	27.51	30	24	1.19	1.42	0.23	0.29	0.15	0.03	0.00
					SMELT	57	64.02	91	30	15.08	227.53	2.31	6.90	0.11	1.59	2.53
2	APR 30/79	790008	15	10	AGE 0	24	29.67	49	27	4.18	17.47	0.25	0.87	0.19	0.13	0.02
					AGE 1	2	83.00	94	72	11.00	121.00	6.64	8.63	4.66	1.99	3.94
					SMELT	26	45.62	79	26	14.55	211.78	0.82	2.37	0.06	0.77	0.59
3	APR 30/79	790009	07	20	AGE 1	1	83.00	83	83	0.00	0.00	6.00	6.00	6.00	0.00	0.00
					SMELT	26	58.92	70	39	7.40	54.69	1.60	3.06	0.27	0.63	0.39
					STICKLEBACK	65	30.29	45	22	3.85	14.82	0.30	1.05	0.10	0.15	0.02

Table 13c - Trawl statistics by tow for Pitt Lake

TRAWL					CATCH		LENGTH (mm)					WEIGHT (g)				
AREA	DATE	TOW	DEPTH (m)	DURATION (min)	SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
3	MAY 1/79	790010	22	15	OTHER	1	79.00	79	79	0.00	0.00	6.04	6.04	6.04	0.00	0.00
					SMELT	13	73.00	113	53	15.23	231.85	3.33	11.58	1.14	2.67	7.11
					STICKLEBACK	223	30.70	39	22	3.12	9.71	0.31	0.57	0.09	0.09	0.00
SURVEY # 7902																
1	MAY 7/79	790011	15	5	AGE 0	4	27.25	29	26	1.09	1.19	0.23	0.26	0.20	0.02	0.00
					SMELT	28	61.96	91	35	15.18	230.32	2.12	6.34	0.20	1.44	2.07
1	MAY 7/79	790012	30	10	AGE 0	82	28.09	39	25	2.06	4.22	0.34	0.42	0.27	0.03	0.00
					AGE 1	1	90.00	90	90	0.00	0.00	8.83	8.83	8.83	0.00	0.00
					OTHER	1	89.00	89	89	0.00	0.00	8.68	8.68	8.68	0.00	0.00
					SMELT	56	60.68	108	28	16.29	265.50	2.10	11.71	0.07	1.98	3.91
2	MAY 7/79	790013	22	15	AGE 0	16	28.81	30	27	1.01	1.03	0.24	0.30	0.19	0.03	0.00
					SMELT	6	57.33	67	38	10.16	103.22	1.41	2.12	0.31	0.66	0.43
					STICKLEBACK	4	31.50	35	28	2.69	7.25	0.31	0.37	0.24	0.06	0.00
3	MAY 8/79	790014	12	20	SMELT	8	49.50	70	33	13.23	175.00	1.09	2.97	0.12	0.91	0.82
					STICKLEBACK	11	30.27	38	26	3.49	12.20	0.32	0.62	0.22	0.11	0.01
3	MAY 8/79	790015	15	15	SCULPIN	1	33.00	33	33	0.00	0.00	0.47	0.47	0.47	0.00	0.00
					SMELT	10	54.70	113	25	22.28	496.41	2.02	12.07	0.05	3.39	11.49
					STICKLEBACK	29	31.76	36	25	2.84	8.05	0.36	0.52	0.17	0.08	0.00
SURVEY # 7903																
1	MAY 14/79	790016	07	5	AGE 0	20	29.40	32	27	1.39	1.94	0.23	0.29	0.17	0.03	0.00
					SMELT	115	62.67	104	33	12.87	165.75	1.93	9.41	0.14	1.41	1.98
1	MAY 14/79	790017	30	10	AGE 0	55	29.04	31	27	0.93	0.87	0.20	0.25	0.15	0.03	0.00
					AGE 1	1	93.00	93	93	0.00	0.00	8.08	8.08	8.08	0.00	0.00
					SMELT	119	61.45	100	33	11.54	133.07	1.73	7.88	0.12	1.25	1.55
2	MAY 14/79	790018	22	10	AGE 0	290	28.81	32	25	1.08	1.17	0.22	0.30	0.14	0.03	0.00
					AGE 1	2	83.00	84	82	1.00	1.00	5.68	5.81	5.56	0.13	0.02
					SMELT	26	50.23	64	29	9.06	82.02	0.94	1.98	0.08	0.51	0.26

Table 13c - Trawl statistics by tow for Pitt Lake

TRAWL					CATCH		LENGTH (mm)					WEIGHT (g)				
AREA	DATE	TOW	DEPTH (m)	DURATION (min)	SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
3	MAY 15/79	790019	10	20	SMELT	19	57.63	86	28	13.66	186.65	1.61	4.90	0.08	1.14	1.30
					WHITEFISH	1	116.00	116	116	0.00	0.00	16.65	16.65	16.65	0.00	0.00
SURVEY # 7904																
1	MAY 23/79	790020	22	10	AGE 0	38	29.13	31	26	1.13	1.27	0.23	0.30	0.17	0.02	0.00
					SMELT	34	56.68	79	32	9.60	92.10	1.34	3.10	0.15	0.68	0.46
2	MAY 23/79	790021	15	5	AGE 0	192	29.39	32	19	1.22	1.50	0.22	0.28	0.13	0.03	0.00
					SMELT	51	47.63	90	29	10.90	118.72	0.88	6.32	0.08	0.92	0.84
3	MAY 24/79	790022	07	20	AGE 0	2	30.00	30	30	0.00	0.00	0.23	0.24	0.22	0.01	0.00
					AGE 1	1	98.00	98	98	0.00	0.00	10.83	10.83	10.83	0.00	0.00
					SMELT	10	47.40	68	30	13.48	181.84	0.88	2.30	0.06	0.75	0.56
SURVEY # 7905																
1	MAY 28/79	790023	22	10	AGE 0	22	28.14	31	26	1.29	1.66	0.19	0.26	0.15	0.02	0.00
					SMELT	18	52.44	79	29	16.10	259.25	1.37	3.31	0.10	1.15	1.33
2	MAY 28/79	790024	15	5	AGE 0	64	28.86	32	25	1.17	1.37	0.23	0.31	0.15	0.03	0.00
					SMELT	18	54.61	95	29	18.21	331.57	1.70	7.41	0.13	1.88	3.55
2	MAY 28/79	790025	15	15	AGE 0	10	29.60	31	28	0.80	0.64	0.24	0.29	0.20	0.03	0.00
					SMELT	16	59.13	122	30	19.99	399.48	2.48	17.00	0.10	3.85	14.83
3	MAY 29/79	790026	07	20	AGE 0	65	31.02	53	28	3.72	13.83	0.33	1.67	0.18	0.21	0.04
					SCULPIN	4	33.50	41	30	4.39	19.25	0.47	0.78	0.34	0.18	0.03
					SMELT	24	53.79	139	31	22.05	486.00	1.92	19.64	0.12	3.80	14.47
3	MAY 29/79	790027	07	10	AGE 0	4	30.00	31	29	0.71	0.50	0.24	0.25	0.23	0.00	0.00
					SMELT	23	55.43	74	26	11.04	121.98	1.42	2.54	0.07	0.68	0.46
					STICKLEBACK	45	35.82	42	29	2.52	6.37	0.53	0.76	0.29	0.11	0.01
1	MAY 31/79	790028	15	10	AGE 0	27	28.85	30	27	0.93	0.87	0.20	0.25	0.17	0.03	0.00
					SMELT	36	57.86	95	29	15.05	226.40	1.73	6.63	0.12	1.49	2.21
2	MAY 31/79	790029	15	5	AGE 0	67	29.12	32	27	1.07	1.15	0.22	0.28	0.16	0.02	0.00
					SMELT	42	51.81	122	29	20.17	406.87	1.60	13.69	0.10	2.71	7.36

Table 13c - Trawl statistics by tow for Pitt Lake

TRAWL					CATCH		LENGTH (mm)					WEIGHT (g)				
AREA	DATE	TOW	DEPTH (m)	DURATION (min)	SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
3	JUN 1/79	790030	15	5	AGE 0	100	30.14	39	27	2.06	4.26	0.31	0.70	0.19	0.09	0.00
					SMELT	9	44.78	93	27	18.93	358.40	1.22	7.12	0.09	2.12	4.50
3	JUN 1/79	790031	15	15	AGE 0	56	30.84	40	28	2.14	4.56	0.32	0.82	0.19	0.11	0.01
					SMELT	26	45.96	70	29	10.47	109.65	0.80	2.39	0.10	0.63	0.40
SURVEY # 7906																
1	JUN 7/79	790032	15	10	AGE 0	7	29.14	31	28	0.99	0.98	0.21	0.24	0.17	0.03	0.00
					SMELT	58	62.22	91	34	13.55	183.55	2.08	6.00	0.21	1.32	1.75
2	JUN 7/79	790033	07	5	AGE 0	4	29.50	31	28	1.12	1.25	0.22	0.23	0.22	0.00	0.00
					SMELT	30	49.30	100	27	19.16	367.01	1.31	7.81	0.06	1.77	3.14
2	JUN 7/79	790034	15	15	AGE 0	56	29.04	31	26	1.25	1.57	0.23	0.29	0.15	0.03	0.00
					SMELT	61	39.49	84	28	11.57	133.95	0.54	4.45	0.09	0.75	0.56
3	JUN 8/79	790035	07	5	AGE 0	6	31.67	37	29	2.75	7.56	0.32	0.59	0.20	0.13	0.02
					SMELT	7	43.29	85	30	17.29	298.78	0.94	4.83	0.12	1.59	2.53
3	JUN 8/79	790036	22	15	AGE 0	53	31.30	37	27	2.31	5.34	0.31	0.52	0.19	0.09	0.00
					SMELT	6	55.33	74	30	16.32	266.22	1.36	2.61	0.12	0.94	0.88
SURVEY # 7907																
1	JUN 13/79	790037	15	10	AGE 0	12	29.25	32	28	1.16	1.35	0.22	0.40	0.17	0.06	0.00
					SMELT	60	60.85	86	32	10.92	119.19	1.82	5.01	0.19	1.00	1.00
2	JUN 13/79	790038	15	10	AGE 0	16	29.31	31	26	1.49	2.21	0.22	0.26	0.16	0.03	0.00
					SMELT	29	53.90	99	33	15.21	231.33	1.46	7.28	0.17	1.41	1.99
3	JUN 14/79	790039	15	20	AGE 0	8	37.25	47	30	4.82	23.19	0.65	1.30	0.23	0.30	0.09
					SCULPIN	1	45.00	45	45	0.00	0.00	1.18	1.18	1.18	0.00	0.00
					SMELT	6	52.33	58	35	8.73	76.22	1.20	1.64	0.21	0.54	0.29
					STICKLEBACK	4	39.25	42	36	2.38	5.69	0.70	0.81	0.57	0.09	0.00

Table 13c - Trawl statistics by tow for Pitt Lake

TRAWL					CATCH		LENGTH (mm)					WEIGHT (g)				
AREA	DATE	TOW	DEPTH (m)	DURATION (min)	SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
SURVEY # 7908																
1	JUN 18/79	790040	15	5	AGE 0	3	34.00	42	29	5.72	32.67	0.45	0.84	0.20	0.28	0.08
					SMELT	44	51.43	131	30	19.01	361.25	1.56	20.50	0.14	3.29	10.82
2	JUN 18/79	790041	07	5	AGE 0	7	29.43	31	27	1.40	1.96	0.23	0.28	0.17	0.04	0.00
					OTHER	1	62.00	62	62	0.00	0.00	2.67	2.67	2.67	0.00	0.00
					SMELT	75	53.23	132	32	16.97	287.96	1.57	20.50	0.12	3.08	9.49
SURVEY # 7909																
1	JUN 28/79	790042	07	5	SMELT	49	61.73	95	38	13.80	190.48	2.16	7.50	0.30	1.53	2.33
2	JUN 28/79	790043	15	20	AGE 0	6	32.83	42	27	5.43	29.47	0.46	1.04	0.19	0.30	0.09
					SMELT	23	63.39	118	30	22.07	487.19	2.69	12.76	0.10	3.24	10.48
2	JUN 28/79	790044	18	10	AGE 0	61	41.82	56	30	6.09	37.10	0.99	2.21	0.37	0.44	0.19
					SMELT	17	57.12	95	43	12.69	161.16	1.71	7.59	0.55	1.59	2.53
3	JUN 29/79	790045	15	20	AGE 0	2	50.00	57	43	7.00	49.00	1.78	2.73	0.84	0.94	0.89
					SCULPIN	1	39.00	39	39	0.00	0.00	0.84	0.84	0.84	0.00	0.00
					SMELT	2	65.50	66	65	0.50	0.25	2.06	2.45	1.67	0.39	0.15
					STICKLEBACK	5	38.80	42	33	3.37	11.36	0.66	0.78	0.42	0.13	0.02
SURVEY # 7910																
1	JUL 4/79	790046	15	5	AGE 0	3	50.00	56	44	4.90	24.00	1.70	2.36	1.07	0.53	0.28
					SMELT	29	50.62	78	34	11.18	124.93	1.09	3.87	0.20	0.84	0.71
2	JUL 4/79	790047	15	10	AGE 0	14	47.00	63	36	8.01	64.14	1.40	3.10	0.54	0.72	0.52
					SMELT	6	53.33	87	32	19.29	372.22	1.57	4.97	0.11	1.70	2.89
					STICKLEBACK	1	46.00	46	46	0.00	0.00	0.92	0.92	0.92	0.00	0.00
3	JUL 4/79	790048	15	5	AGE 0	3	48.00	51	42	4.24	18.00	1.38	1.61	0.92	0.32	0.10
3	JUL 5/79	790049	15	10	AGE 0	39	43.46	58	32	6.12	37.48	1.03	2.22	0.36	0.49	0.24
					SMELT	34	60.12	72	42	6.00	36.04	1.69	2.99	0.54	0.49	0.24
					STICKLEBACK	10	40.60	42	37	1.50	2.24	0.75	0.95	0.55	0.10	0.01
SURVEY # 7911																
3	JUL 12/79	790050	20	20	AGE 0	1	58.00	58	58	0.00	0.00	2.82	2.82	2.82	0.00	0.00

Table 13c - Trawl statistics by tow for Pitt Lake

TRAWL					CATCH		LENGTH (mm)					WEIGHT (g)				
AREA	DATE	TOW	DEPTH (m)	DURATION (min)	SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
2	JUL 13/79	790051	15	20	SMELT	9	60.11	72	53	4.93	24.32	1.74	2.65	1.06	0.42	0.17
					AGE 0	37	50.86	65	39	6.97	48.60	1.69	3.54	0.71	0.71	0.50
					SMELT	11	64.27	112	42	17.26	298.02	2.46	11.53	0.42	2.93	8.61
					STICKLEBACK	10	41.40	45	38	2.50	6.24	0.76	0.99	0.55	0.13	0.02
1	JUL 13/79	790052	15	10	AGE 0	1	60.00	60	60	0.00	0.00	2.38	2.38	2.38	0.00	0.00
					SCULPIN	1	41.00	41	41	0.00	0.00	0.80	0.80	0.80	0.00	0.00
					SMELT	27	56.19	131	33	22.28	496.30	2.12	17.45	0.23	3.62	13.13
					STICKLEBACK	1	42.00	42	42	0.00	0.00	0.89	0.89	0.89	0.00	0.00
SURVEY # 7912																
1	JUL 17/79	790053	15	15	AGE 0	14	62.07	78	47	7.44	55.35	3.18	6.44	1.28	1.28	1.64
					SMELT	42	65.24	132	45	15.50	240.18	2.53	17.61	0.63	2.66	7.07
					STICKLEBACK	1	48.00	48	48	0.00	0.00	1.26	1.26	1.26	0.00	0.00
2	JUL 17/79	790054	07	10	AGE 0	1	46.00	46	46	0.00	0.00	1.13	1.13	1.13	0.00	0.00
					SMELT	6	59.00	95	40	20.45	418.33	2.13	7.00	0.39	2.32	5.40
					STICKLEBACK	6	41.67	43	39	1.25	1.56	0.81	0.92	0.65	0.09	0.00
3	JUL 18/79	790055	15	20	AGE 0	12	51.58	62	40	7.66	58.74	2.28	7.60	0.79	1.76	3.10
					SMELT	16	68.00	138	44	19.82	393.00	3.33	23.18	0.55	5.19	26.97
					STICKLEBACK	2	42.00	44	40	2.00	4.00	0.87	0.93	0.80	0.06	0.00
3	JUL 18/79	790056	07	5	SMELT	29	61.76	75	47	6.43	41.29	1.70	2.91	0.68	0.54	0.29
					STICKLEBACK	20	38.45	47	20	7.17	51.35	0.71	1.30	0.09	0.30	0.09
SURVEY # 7913																
1	JUL 23/79	790057	15	10	AGE 0	59	62.56	78	39	6.86	47.03	3.07	5.92	1.47	1.04	1.08
					SMELT	99	69.17	135	41	14.52	210.71	2.63	15.43	0.36	2.40	5.77
					STICKLEBACK	1	42.00	42	42	0.00	0.00	0.73	0.73	0.73	0.00	0.00

Table 13c - Trawl statistics by tow for Pitt Lake

TRAWL					CATCH		LENGTH (mm)					WEIGHT (g)				
AREA	DATE	TOW	DEPTH (m)	DURATION (min)	SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
2	JUL 23/79	790058	15	10	AGE 0	34	61.85	78	50	6.99	48.89	2.91	6.76	0.34	1.29	1.67
					SMELT	17	69.76	108	42	20.81	433.24	3.41	12.05	0.45	3.22	10.37
					STICKLEBACK	1	42.00	42	42	0.00	0.00	1.10	1.10	1.10	0.00	0.00
2	JUL 23/79	790059	15	10	AGE 0	20	60.85	70	47	8.46	71.53	2.96	4.43	1.25	1.16	1.34
					SMELT	21	55.86	69	27	10.63	113.07	1.43	2.71	0.07	0.69	0.47
					STICKLEBACK	21	42.52	48	35	2.72	7.39	0.94	1.40	0.50	0.19	0.04
3	JUL 24/79	790060	07	10	AGE 0	4	60.00	70	45	9.97	99.50	2.80	4.00	1.13	1.19	1.42
					SMELT	3	60.67	69	55	6.02	36.22	1.55	2.00	1.18	0.34	0.12
					STICKLEBACK	139	41.32	48	20	3.99	15.91	0.88	1.53	0.08	0.22	0.05
SURVEY # 7915																
1	JUL 30/79	790064	15	15	AGE 0	12	63.75	80	55	7.04	49.52	3.30	6.10	1.95	1.10	1.21
					AGE 1	2	119.00	120	118	1.00	1.00	21.20	21.50	20.90	0.30	0.09
					SMELT	32	59.78	80	25	18.25	332.98	1.93	3.77	0.03	1.17	1.36
					STICKLEBACK	1	23.00	23	23	0.00	0.00	0.10	0.10	0.10	0.00	0.00
2	JUL 30/79	790065	22	10	AGE 0	13	65.62	75	49	5.99	35.93	3.48	5.11	1.24	0.92	0.85
					SMELT	14	58.43	85	37	14.01	196.24	1.70	4.78	0.24	1.27	1.62
2	JUL 30/79	790066	07	5	AGE 0	3	72.33	82	55	12.28	150.89	5.08	7.05	2.00	2.20	4.86
					SMELT	26	63.35	125	40	17.97	322.92	2.63	18.50	0.38	3.52	12.42
3	JUL 31/79	790067	10	10	AGE 0	5	64.40	80	52	9.85	97.04	3.38	6.44	1.62	1.76	3.08
					SMELT	15	38.13	61	19	11.89	141.32	0.74	1.71	0.06	0.48	0.23
					STICKLEBACK	69	38.87	47	21	6.85	46.87	0.78	1.49	0.07	0.32	0.10
SURVEY # 7918																
1	AUG 23/79	790094	22	10	AGE 0	11	66.55	82	50	7.79	60.61	3.98	7.20	1.47	1.42	2.02
					SMELT	70	37.80	107	20	20.53	421.36	0.84	9.66	0.00	1.72	2.97
2	AUG 23/79	790095	22	10	AGE 0	7	75.00	87	60	8.91	79.43	5.75	9.42	2.60	2.31	5.33
					SCULPIN	1	37.00	37	37	0.00	0.00	0.51	0.51	0.51	0.00	0.00
					SMELT	48	34.27	108	22	17.26	297.99	0.60	10.24	0.02	1.64	2.70
					STICKLEBACK	2	22.50	23	22	0.50	0.25	0.12	0.14	0.09	0.03	0.00
2	AUG 23/79	790096	22	10	AGE 0	11	71.09	77	65	3.32	10.99	4.49	5.85	3.19	0.82	0.68
					SMELT	85	47.73	141	21	21.13	446.57	1.24	15.91	0.00	1.89	3.59
					STICKLEBACK	2	40.50	41	40	0.50	0.25	0.89	1.11	0.68	0.22	0.05

Table 13c - Trawl statistics by tow for Pitt Lake

TRAWL					CATCH		LENGTH (mm)					WEIGHT (g)				
AREA	DATE	TOW	DEPTH (m)	DURATION (min)	SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
3	AUG 24/79	790097	15	5	AGE 0	1	72.00	72	72	0.00	0.00	4.49	4.49	4.49	0.00	0.00
					STICKLEBACK	71	36.42	51	22	8.60	74.02	0.67	1.62	0.12	0.42	0.18
SURVEY # 7919																
1	SEP 5/79	790098	22	5	AGE 0	15	72.27	85	62	5.52	30.46	5.04	7.58	3.03	1.19	1.42
					SMELT	111	35.21	77	21	13.59	184.76	0.45	3.05	0.01	0.73	0.53
					STICKLEBACK	1	30.00	30	30	0.00	0.00	0.32	0.32	0.32	0.00	0.00
2	SEP 5/79	790099	22	10	AGE 0	3	67.33	74	60	5.73	32.89	3.79	5.18	2.57	1.07	1.15
					SMELT	40	35.08	69	22	15.89	252.57	0.52	2.47	0.01	0.77	0.59
					STICKLEBACK	28	39.93	47	24	7.53	56.71	0.83	1.37	0.20	0.35	0.12
3	SEP 5/79	790100	15	2	SMELT	44	34.73	120	20	19.26	371.06	0.73	15.99	0.01	2.48	6.13
					STICKLEBACK	182	33.88	52	20	8.22	67.52	0.49	1.59	0.09	0.36	0.13
SURVEY # 7920																
1	SEP 19/79	790101	22	15	AGE 0	36	73.25	83	59	5.89	34.69	4.78	6.71	2.48	1.15	1.32
					SMELT	116	39.96	100	20	18.32	335.64	0.73	7.07	0.00	1.19	1.41
					STICKLEBACK	4	35.50	44	25	8.20	67.25	0.58	1.04	0.16	0.39	0.15
2	SEP 19/79	790102	22	10	AGE 0	9	71.33	80	63	5.62	31.56	4.35	6.24	3.22	1.08	1.17
					SMELT	19	31.21	66	22	8.65	74.80	0.22	1.94	0.03	0.41	0.17
					STICKLEBACK	217	37.77	48	19	7.58	57.53	0.67	1.32	0.08	0.33	0.11
3	SEP 19/79	790103	15	10	AGE 0	2	64.00	67	61	3.00	9.00	3.00	3.28	2.72	0.28	0.08
					OTHER	2	71.50	113	30	41.50	1722.25	7.55	14.75	0.35	7.20	51.84
					SMELT	15	39.93	72	19	18.53	343.26	0.80	2.74	0.00	1.03	1.06
					STICKLEBACK	114	34.37	55	19	8.39	70.39	0.55	1.72	0.08	0.36	0.13

Table 13c - Trawl statistics by tow for Pitt Lake

TRAWL					CATCH		LENGTH (mm)					WEIGHT (g)				
AREA	DATE	TOW	DEPTH (m)	DURATION (min)	SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
SURVEY # 7923																
1	NOV 19/79	790119	15	5	SMELT	118	41.06	135	25	18.94	358.67	0.90	15.21	0.00	2.06	4.25
					STICKLEBACK	13	36.54	45	25	8.03	64.40	0.56	0.97	0.13	0.31	0.10
2	NOV 19/79	790120	44	20	AGE 0	6	73.67	79	67	3.86	14.89	4.63	5.40	3.32	0.73	0.53
					SMELT	80	39.47	110	24	14.16	200.55	0.65	9.97	0.03	1.32	1.74
					STICKLEBACK	82	38.78	47	26	6.07	36.85	0.61	1.00	0.12	0.25	0.06
3	NOV 19/79	790121	07	1	SMELT	28	38.79	73	26	15.94	253.95	0.70	3.40	0.05	1.10	1.22
					STICKLEBACK	126	35.06	49	21	7.34	53.86	0.53	1.27	0.16	0.31	0.09
3	NOV 19/79	790122	37	20	AGE 0	10	76.90	87	70	5.22	27.29	5.34	7.71	3.45	1.23	1.52
					SMELT	37	38.62	77	22	13.21	174.61	0.57	3.72	0.06	0.90	0.80
					STICKLEBACK	54	33.56	46	24	6.63	43.99	0.49	1.22	0.17	0.29	0.08
SURVEY # 8002																
1	FEB 27/80	800004	22	5	AGE 0	3	28.00	30	26	1.63	2.67	0.20	0.24	0.16	0.03	0.00
					SMELT	50	43.28	108	26	19.38	375.52	1.11	10.70	0.03	2.23	4.98
SURVEY # 8003																
2	MAR 3/80	800005	52	20	AGE 1	4	68.25	77	61	5.72	32.69	3.28	4.80	2.33	0.92	0.85
					SMELT	96	66.93	79	34	9.89	97.78	2.51	4.63	0.10	1.13	1.28
					WHITEFISH	1	52.00	52	52	0.00	0.00	1.30	1.30	1.30	0.00	0.00
2	MAR 3/80	800006	15	10	SMELT	2	42.00	50	34	8.00	64.00	0.62	1.04	0.20	0.42	0.18
2	MAR 3/80	800007	15	10	AGE 0	3	28.33	29	28	0.47	0.22	0.26	0.27	0.24	0.01	0.00
					AGE 1	2	80.50	81	80	0.50	0.25	5.95	6.06	5.84	0.11	0.01
					SMELT	50	32.42	62	25	5.29	28.00	0.20	1.60	0.03	0.21	0.04
3	MAR 4/80	800009	52	20	AGE 1	8	77.13	82	65	5.86	34.36	5.01	7.32	3.03	1.14	1.29
					SMELT	52	40.75	61	30	8.65	74.80	0.50	1.63	0.12	0.41	0.17
					STICKLEBACK	1	30.00	30	30	0.00	0.00	0.30	0.30	0.30	0.00	0.00

Table 13c - Trawl statistics by tow for Pitt Lake

TRAWL					CATCH		LENGTH (mm)					WEIGHT (g)				
AREA	DATE	TOW	DEPTH (m)	DURATION (min)	SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
SURVEY # 8006																
3	JUL 17/80	800024	07	10	AGE 0	3	58.33	64	54	4.19	17.56	2.35	2.78	1.82	0.40	0.16
					SMELT	10	46.50	62	39	5.90	34.85	0.59	1.69	0.12	0.42	0.18
					STICKLEBACK	5	45.00	54	39	4.90	24.00	0.92	1.67	0.63	0.38	0.15
2	JUL 17/80	800025	15	15	AGE 0	16	60.81	68	55	3.73	13.90	2.93	4.22	2.04	0.63	0.40
					SMELT	42	44.38	74	22	10.36	107.33	0.81	3.52	0.02	0.64	0.41
					STICKLEBACK	2	42.00	42	42	0.00	0.00	1.03	1.04	1.03	0.00	0.00
2	JUL 17/80	800026	07	10	AGE 0	3	60.00	64	53	4.97	24.67	2.91	3.60	1.78	0.80	0.65
					SMELT	12	45.25	67	37	8.18	66.85	0.75	2.82	0.26	0.66	0.44
					STICKLEBACK	3	49.00	53	43	4.32	18.67	1.47	1.85	0.81	0.47	0.22
1	JUL 18/80	800027	07	5	SMELT	55	57.35	120	37	15.71	246.84	1.82	14.25	0.24	2.10	4.40
SURVEY # 8011																
1	SEP 10/80	800041	22	10	AGE 0	16	86.63	96	79	4.12	16.98	9.13	11.38	6.82	1.35	1.83
					SMELT	34	52.94	78	20	13.71	187.94	1.10	3.31	0.03	0.75	0.57
					STICKLEBACK	413	30.73	53	20	5.42	29.40	0.41	2.00	0.05	0.27	0.07
2	SEP 10/80	800042	15	5	AGE 0	6	87.17	96	75	7.51	56.47	9.21	12.17	5.57	2.22	4.94
					SMELT	18	40.67	100	20	20.95	438.78	0.83	6.81	0.02	1.63	2.65
					STICKLEBACK	126	28.30	50	21	4.43	19.59	0.25	1.46	0.07	0.20	0.04
3	SEP 10/80	800043	22	10	AGE 0	2	87.00	92	82	5.00	25.00	8.30	9.55	7.05	1.25	1.56
					SMELT	11	41.55	73	22	16.38	268.25	0.67	2.56	0.01	0.74	0.54
					STICKLEBACK	159	28.06	52	15	5.27	27.79	0.26	1.60	0.08	0.22	0.05
3	SEP 10/80	800044	07	3	SMELT	35	35.91	88	14	18.38	337.91	0.59	5.18	0.01	1.01	1.03
					STICKLEBACK	156	27.25	53	21	4.27	18.25	0.24	1.46	0.08	0.17	0.03
SURVEY # 8013																
1	OCT 6/80	800049	15	5	SMELT	38	59.50	120	29	17.12	293.14	1.90	12.20	0.10	2.15	4.60
					STICKLEBACK	141	32.30	54	21	6.60	43.59	0.41	1.55	0.11	0.31	0.10

Table 13c - Trawl statistics by tow for Pitt Lake

TRAWL					CATCH		LENGTH (mm)					WEIGHT (g)				
AREA	DATE	TOW	DEPTH (m)	DURATION (min)	SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
2	OCT 6/80	800050	30	20	AGE 0	13	87.69	100	74	6.12	37.44	8.51	12.95	4.49	2.11	4.46
					SMELT	18	41.94	94	25	18.75	351.39	0.91	7.14	0.00	1.65	2.73
					STICKLEBACK	75	31.12	53	22	6.99	48.80	0.34	1.52	0.10	0.29	0.09
2	OCT 6/80	800051	15	3	SMELT	11	41.55	56	26	13.51	182.43	0.65	1.25	0.05	0.54	0.29
					STICKLEBACK	126	31.13	59	22	7.11	50.48	0.38	2.77	0.12	0.41	0.17
3	OCT 6/80	800052	15	3	SCULPIN	1	30.00	30	30	0.00	0.00	0.32	0.32	0.32	0.00	0.00
					SMELT	23	49.04	83	21	17.48	305.69	1.17	4.76	0.00	1.17	1.36
					STICKLEBACK	183	27.93	50	19	5.23	27.39	0.25	1.53	0.07	0.22	0.05
SURVEY # 8104																
1	JUN 11/81	810007	07	10	SMELT	27	62.07	123	36	14.58	212.44	2.35	17.60	0.27	3.11	9.65
2	JUN 11/81	810008	07	10	SMELT	24	53.54	88	28	14.93	222.83	1.46	5.73	0.12	1.30	1.69
3	JUN 12/81	810009	07	15	SMELT	7	47.43	61	31	12.16	147.96	0.85	1.79	0.04	0.63	0.40
					STICKLEBACK	7	38.86	42	37	1.64	2.69	0.58	0.82	0.49	0.11	0.01
SURVEY # 8112																
3	SEP 16/81	810034	13	1	SMELT	11	26.64	35	22	3.70	13.69	0.08	0.28	0.00	0.08	0.00
					STICKLEBACK	186	30.64	48	20	6.95	48.36	0.37	1.33	0.07	0.29	0.08
2	SEP 16/81	810035	19	2	AGE 1	1	97.00	97	97	0.00	0.00	13.65	13.65	13.65	0.00	0.00
					SMELT	123	27.83	39	21	3.24	10.48	0.08	0.36	0.01	0.06	0.00
					STICKLEBACK	49	35.57	70	24	8.68	75.43	0.63	2.46	0.19	0.48	0.23
1	SEP 16/81	810036	19	1	SMELT	145	29.86	118	21	8.54	72.97	0.18	11.72	0.01	0.98	0.97
					STICKLEBACK	632	41.33	51	13	6.14	37.69	0.92	1.75	0.14	0.33	0.11
SURVEY # 8203																
1	JUL 6/82	820007	07	2	AGE 0	1	49.00	49	49	0.00	0.00	1.08	1.08	1.08	0.00	0.00
					SMELT	45	47.11	115	20	19.75	390.23	1.41	16.13	0.00	2.64	6.98
2	JUL 6/82	820008	07	10	AGE 0	2	46.00	63	29	17.00	289.00	1.70	3.16	0.23	1.47	2.15
					SMELT	21	48.33	78	41	9.73	94.70	0.80	2.32	0.34	0.57	0.32
3	JUL 6/82	820009	07	5	AGE 0	3	55.67	57	55	0.94	0.89	2.24	2.36	2.07	0.12	0.01
					SMELT	58	46.78	77	21	12.27	150.52	0.90	3.22	0.02	0.86	0.73
					STICKLEBACK	3	47.67	48	47	0.47	0.22	0.79	1.17	0.10	0.49	0.24

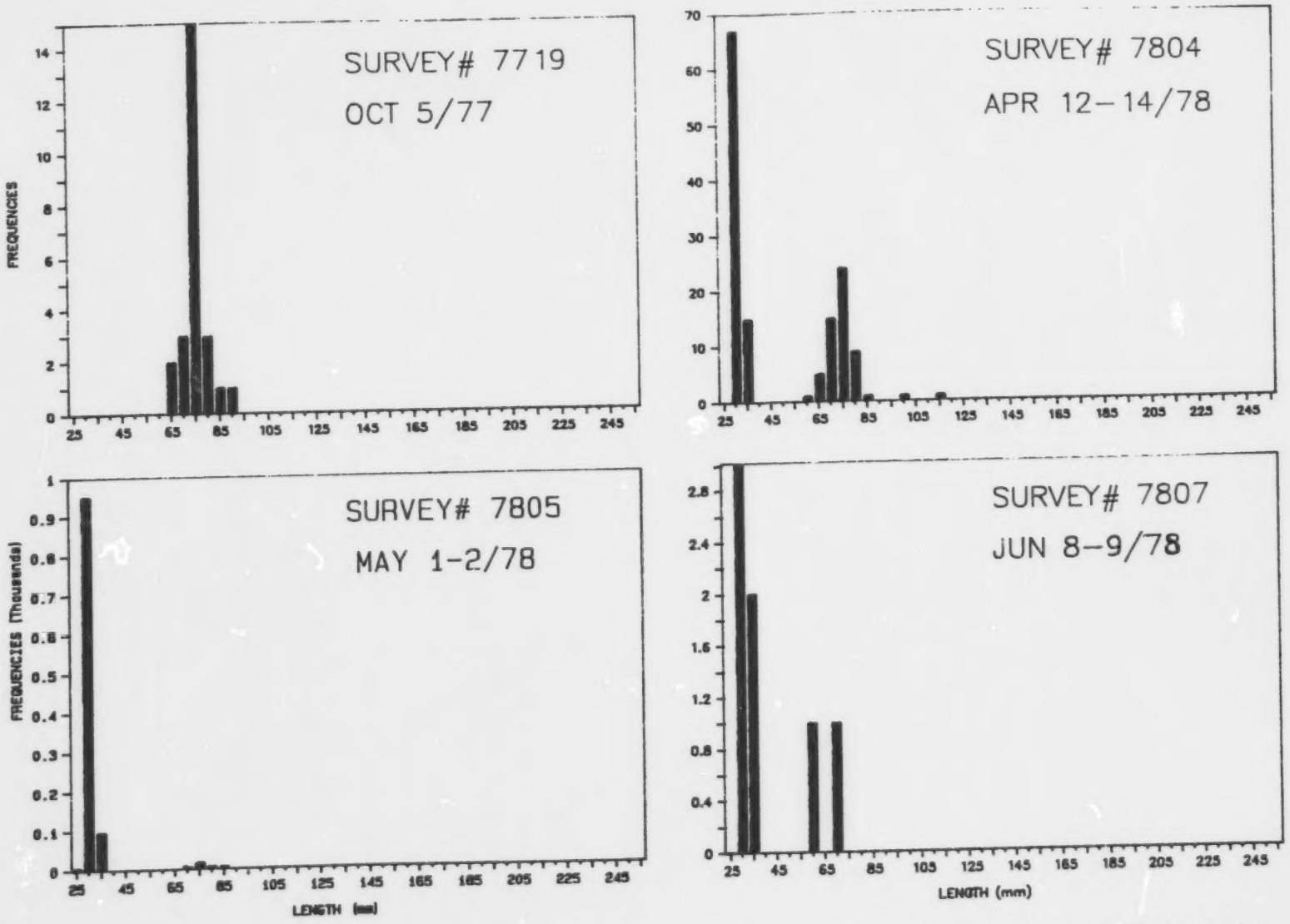


Fig 25a. Sockeye (O. nerka) length frequencies in Pitt Lake.

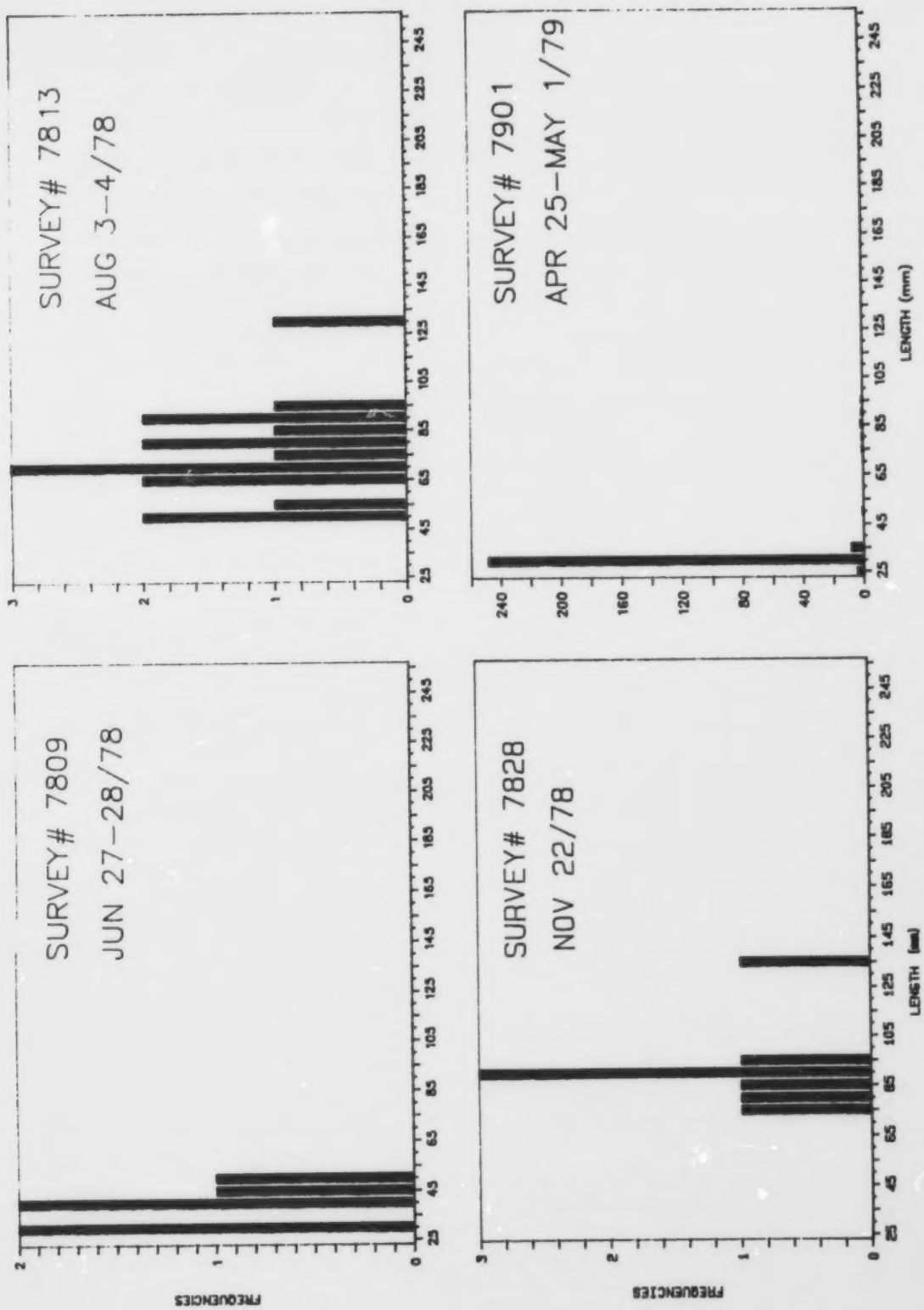


Fig 25a. Continued

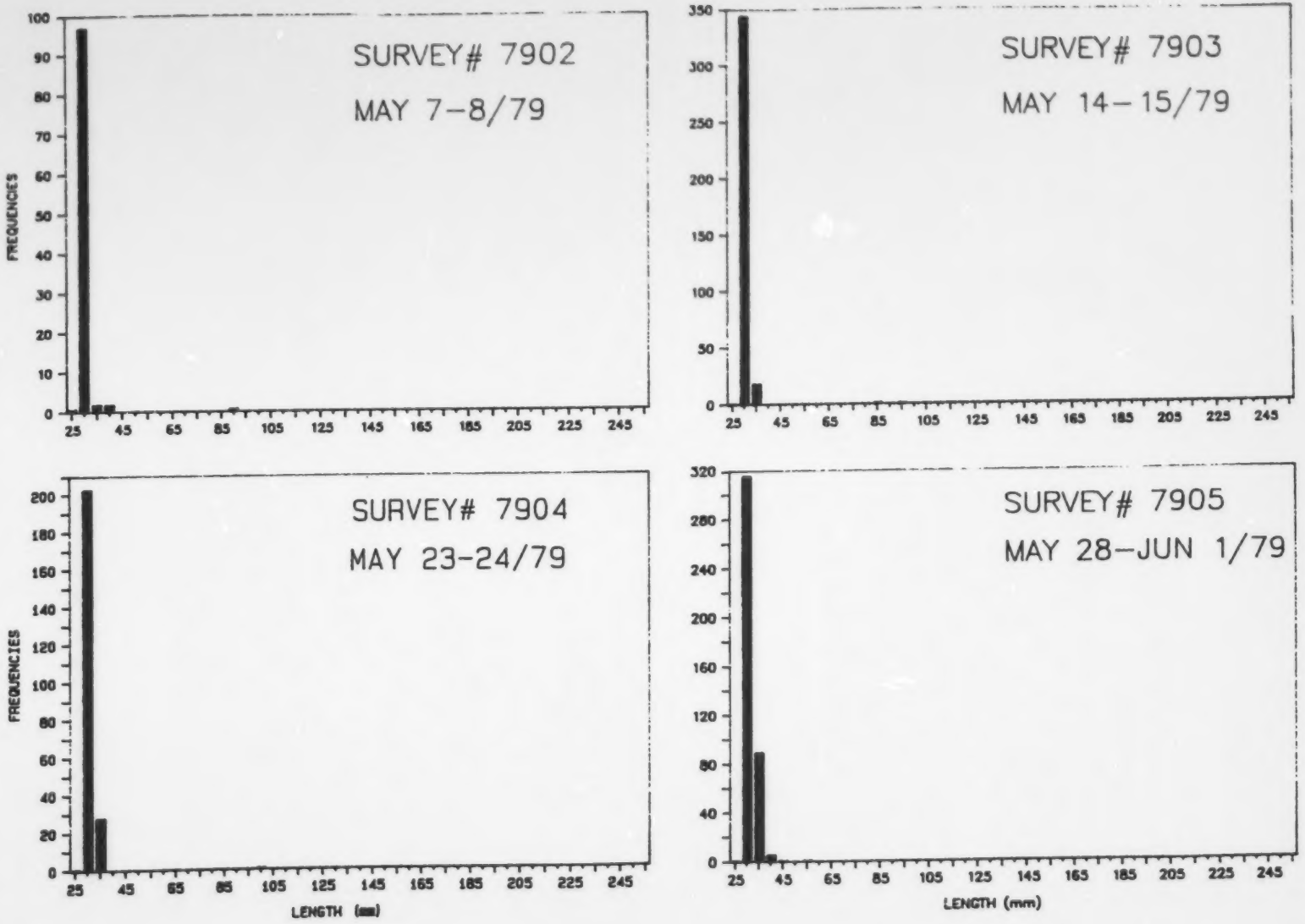


Fig. 25a. Continued

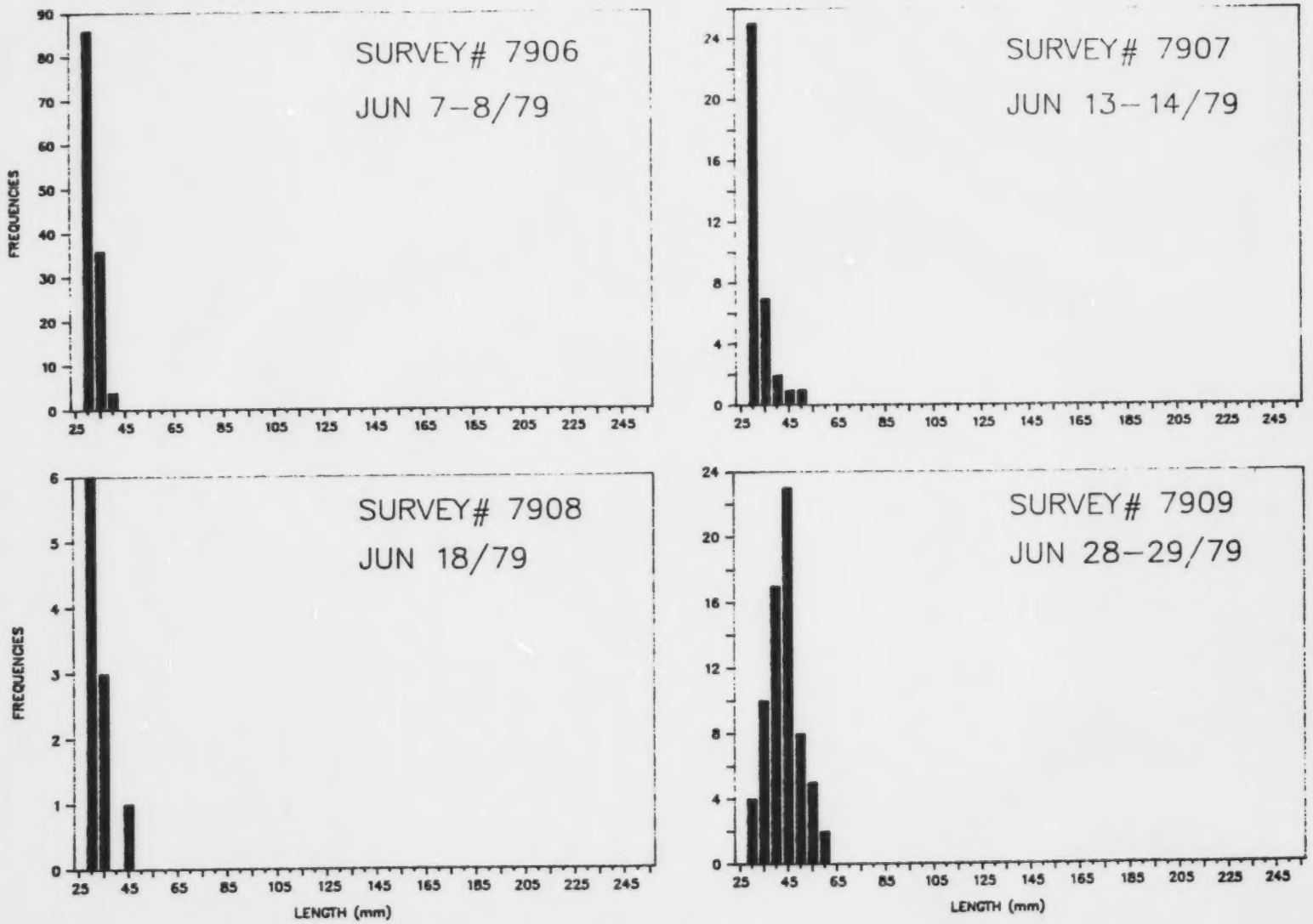


Fig. 25a. Continued

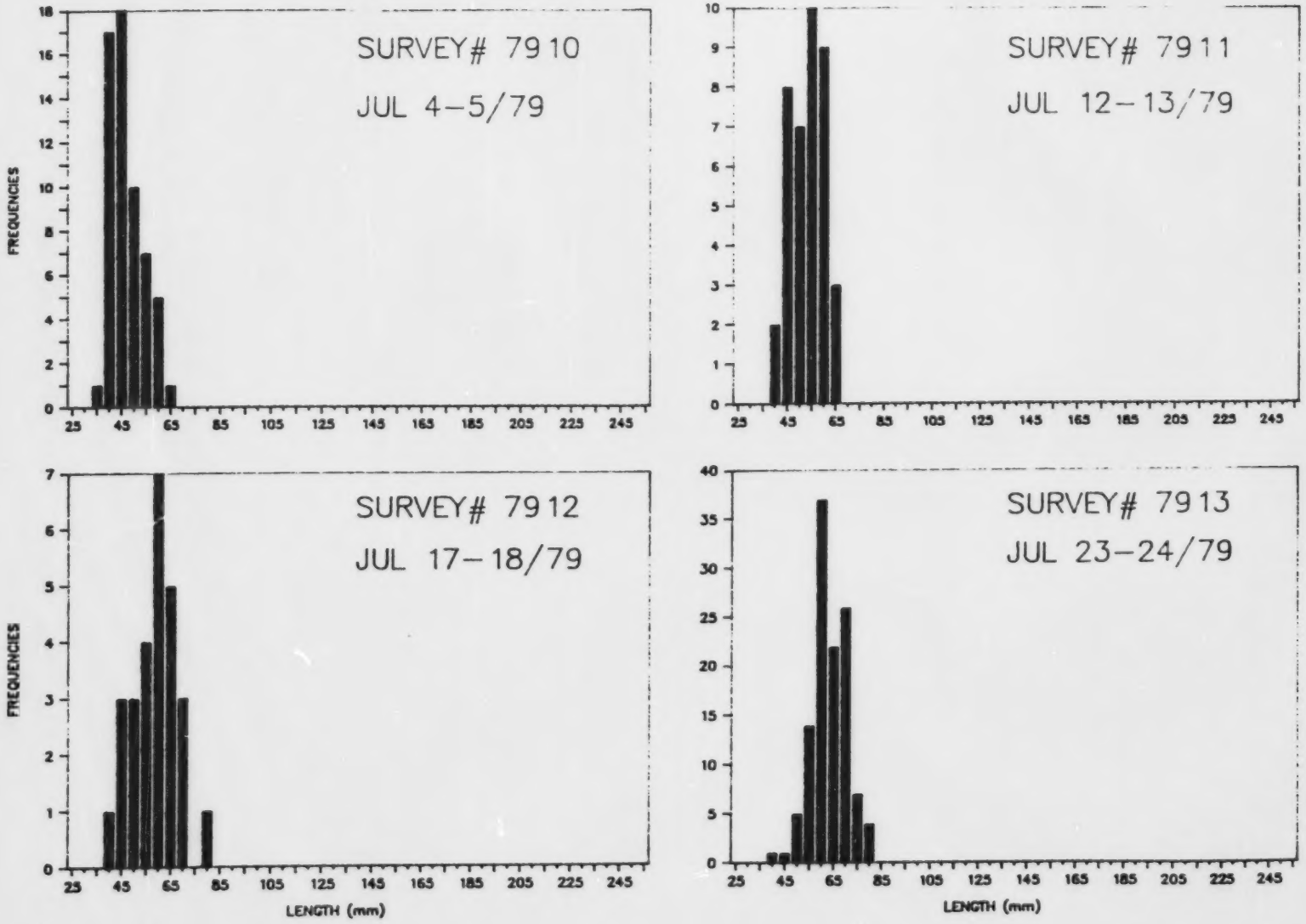


Fig. 25a. Continued

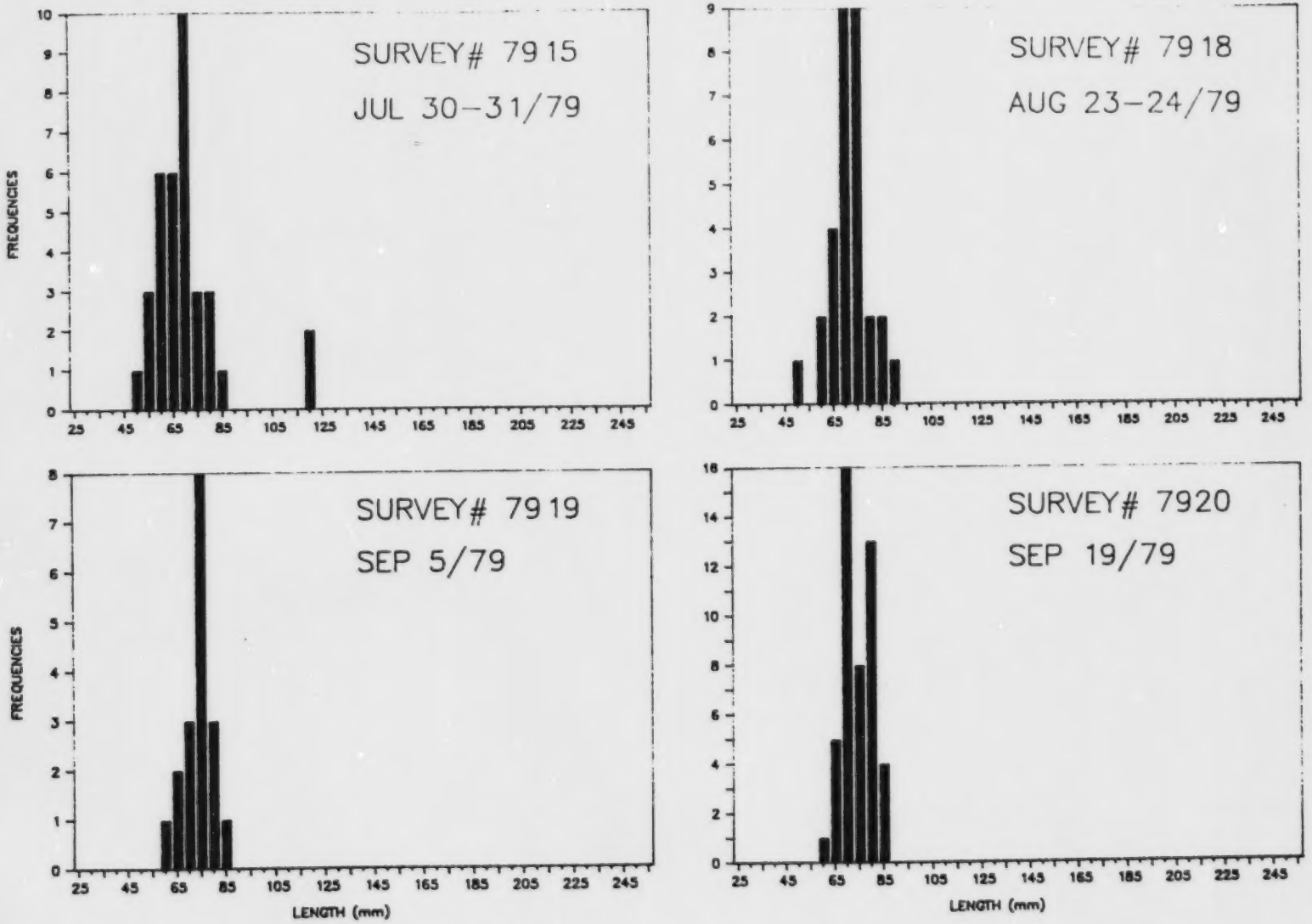


Fig 25a. Continued

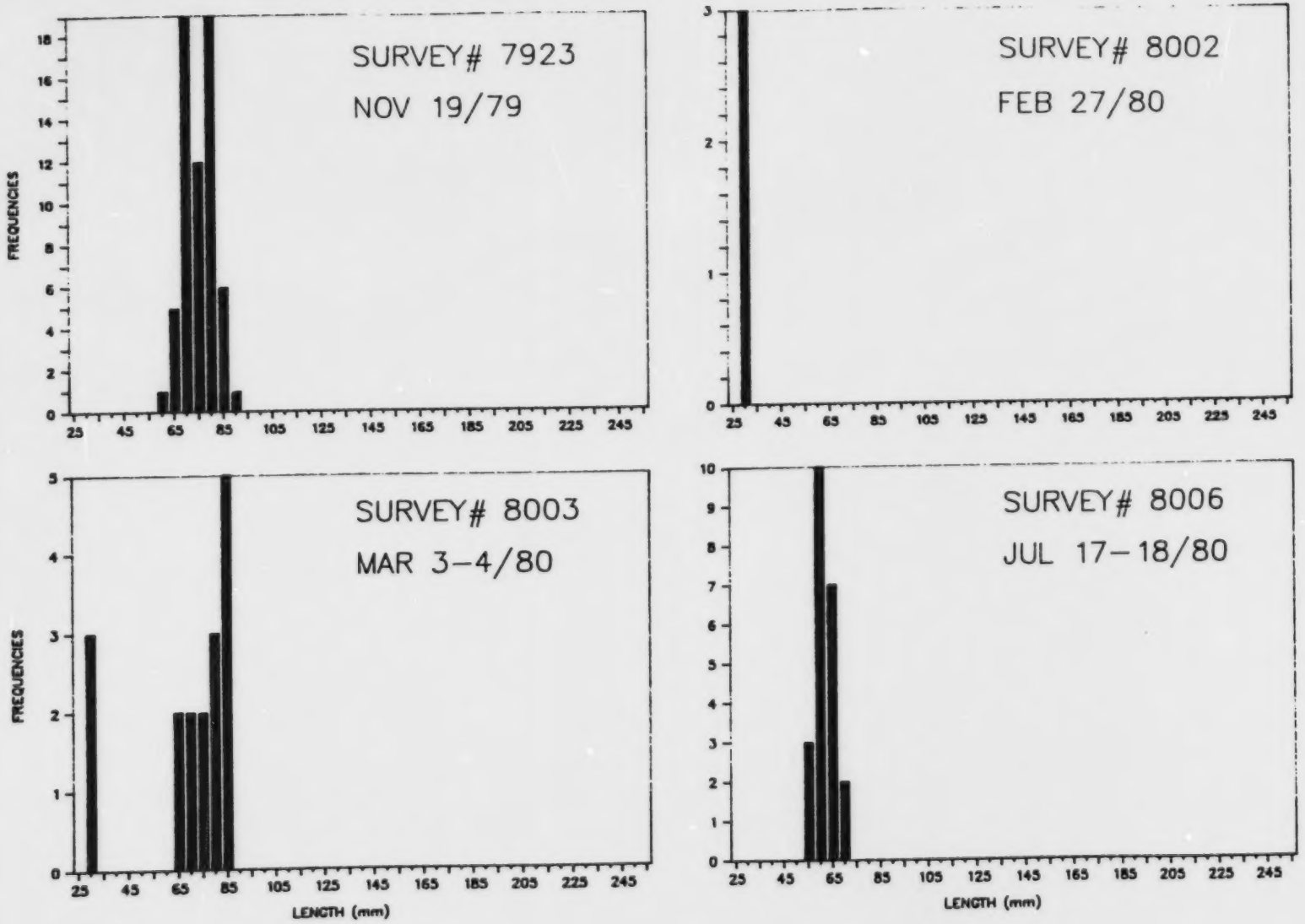


Fig. 25a. Continued

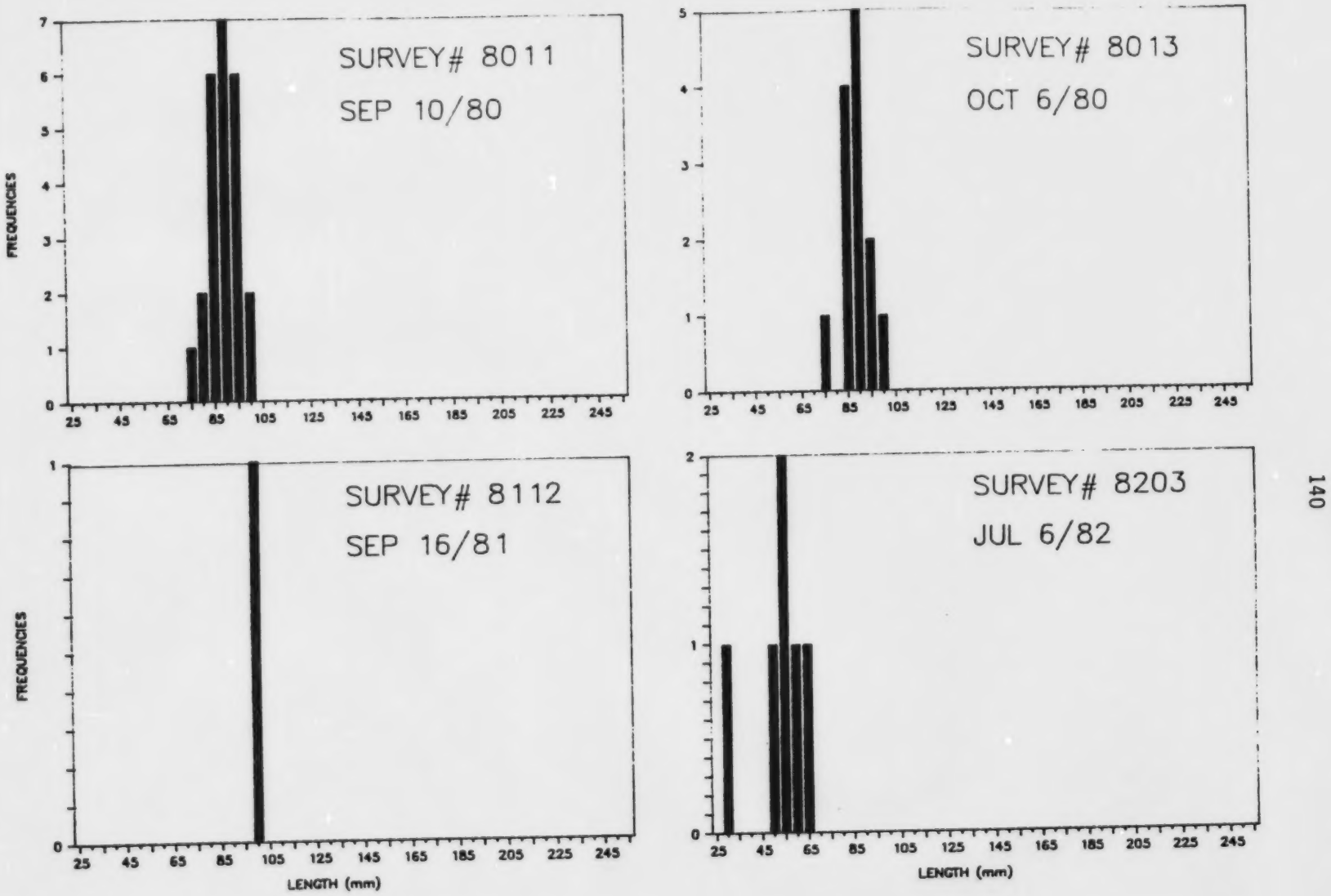


Fig. 25a. Continued

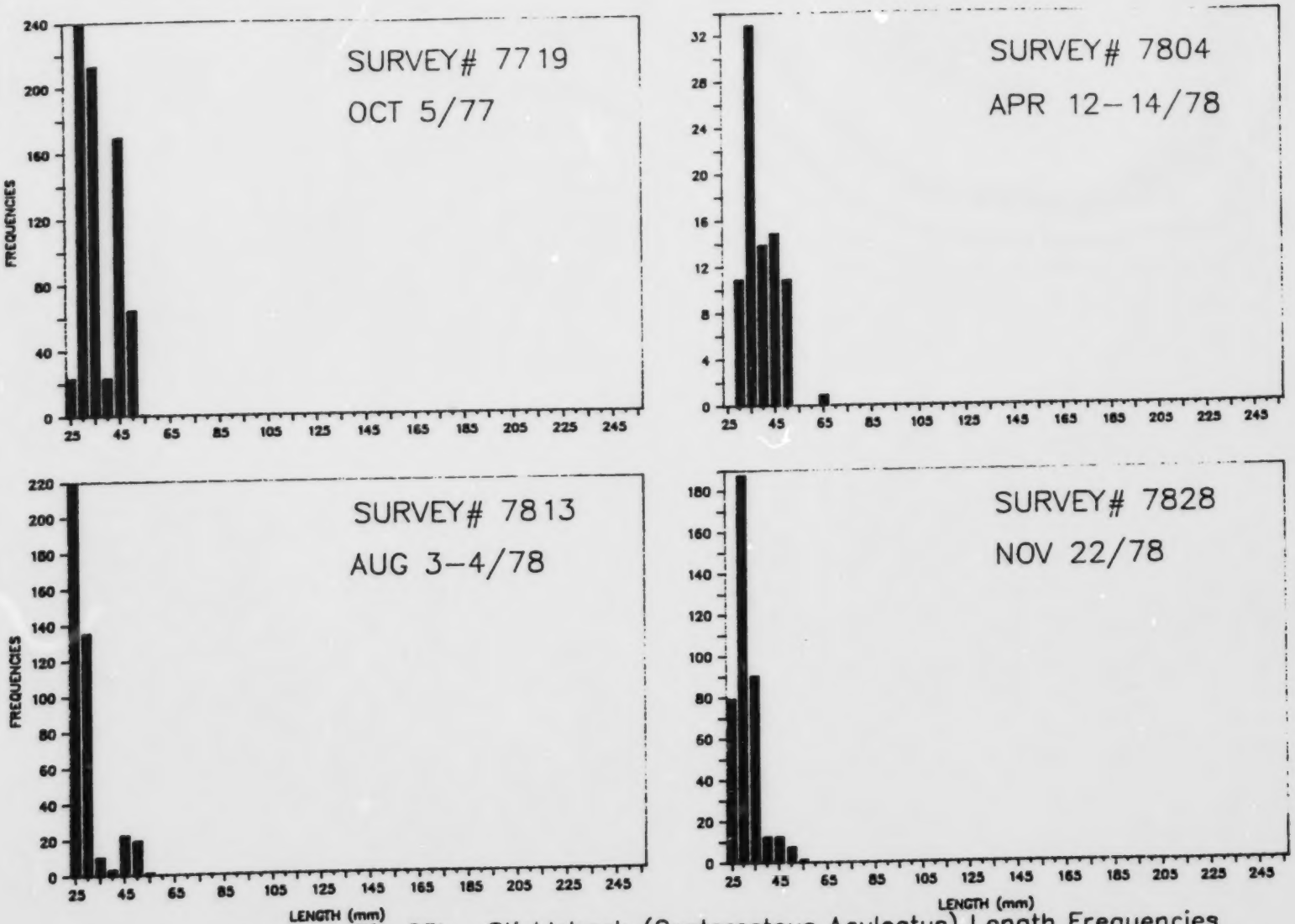
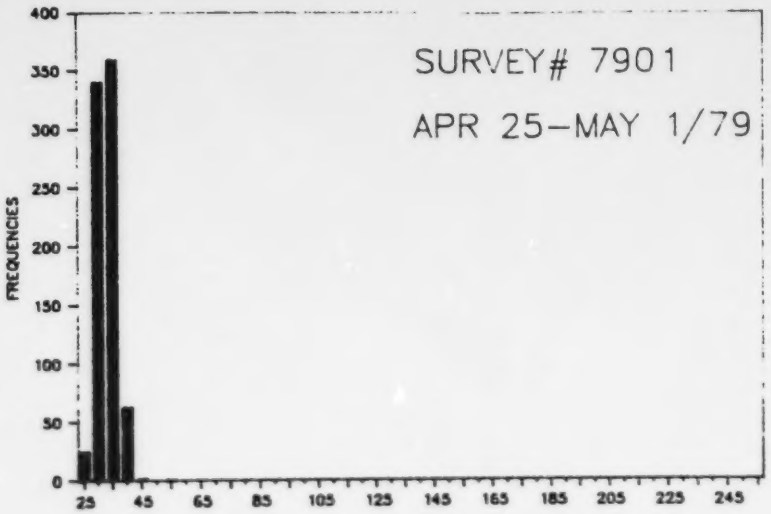
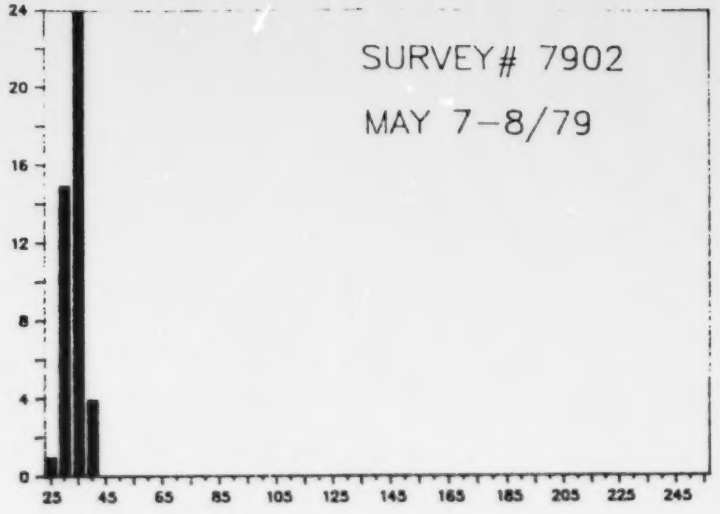
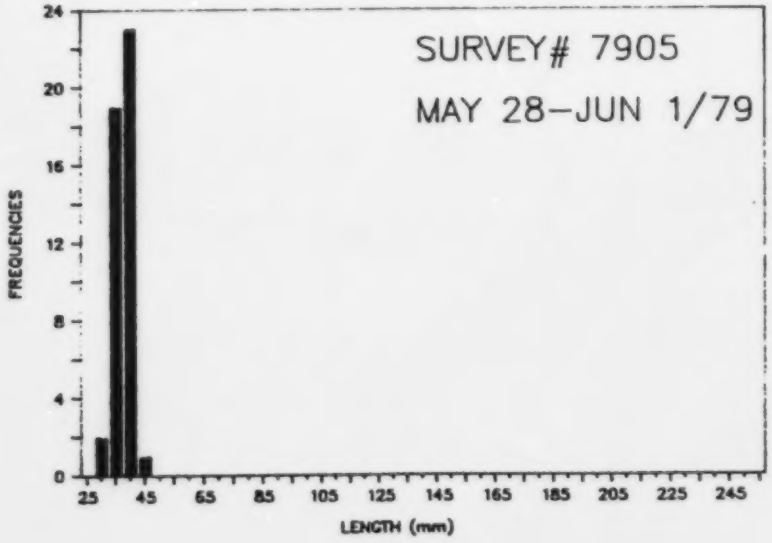


Fig 25b. Stickleback (Gasterosteus Aculeatus) Length Frequencies in Pitt Lake







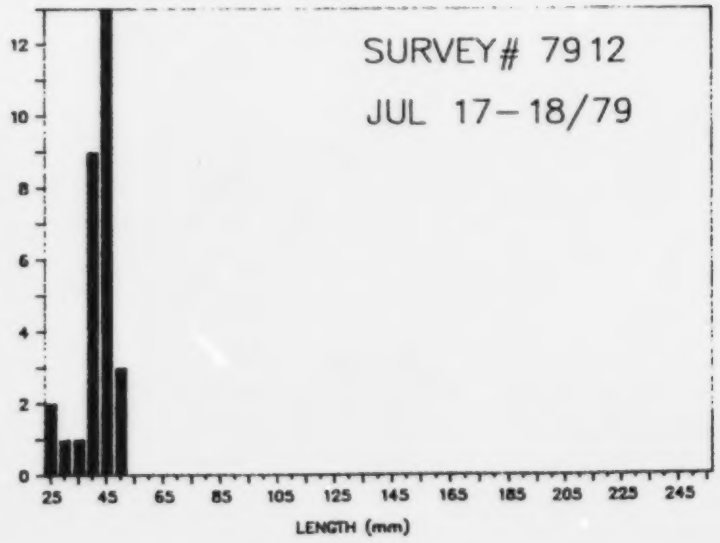
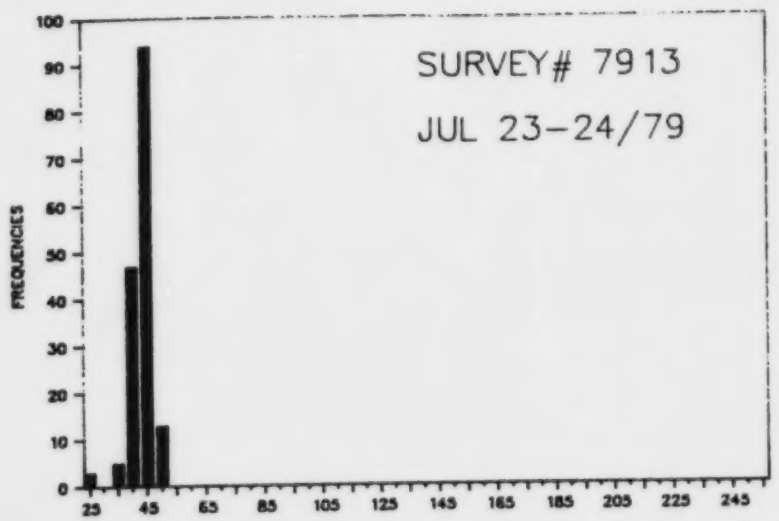
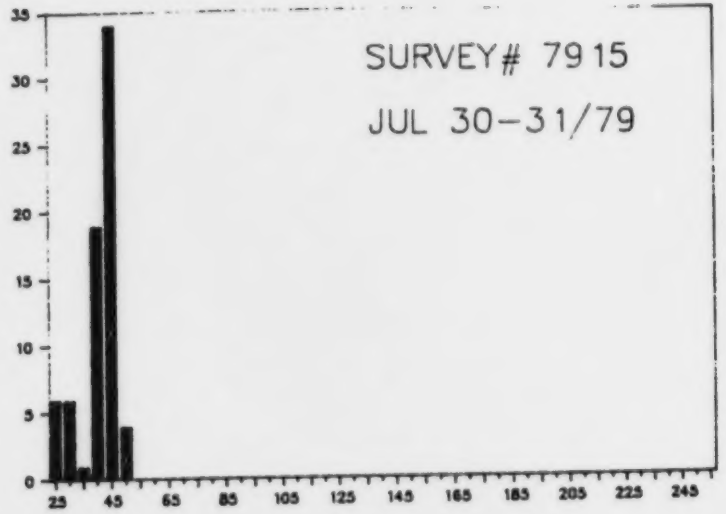
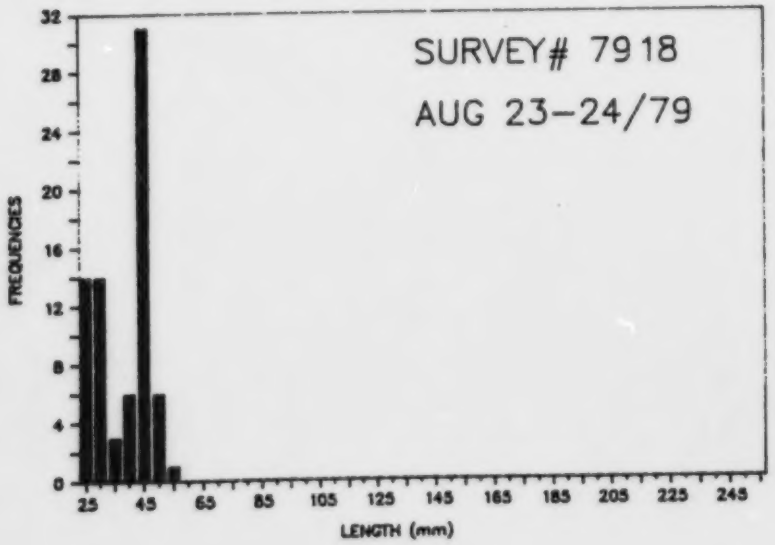


Fig 25b. Continued







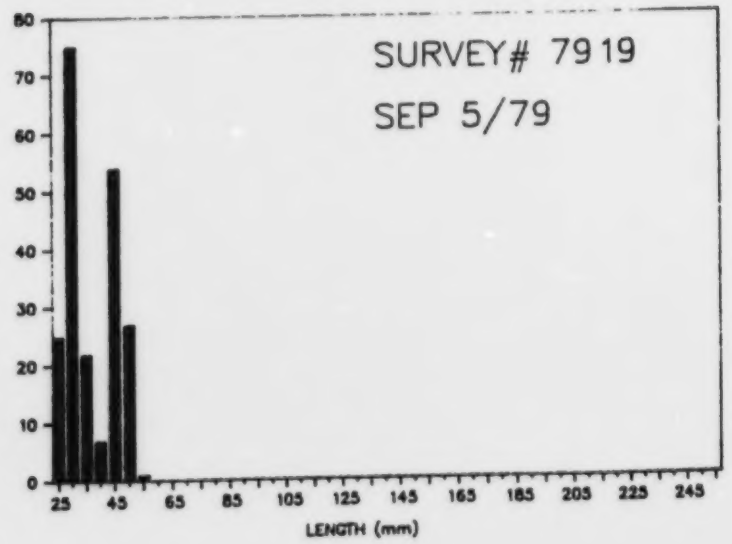


Fig 25b. Continued

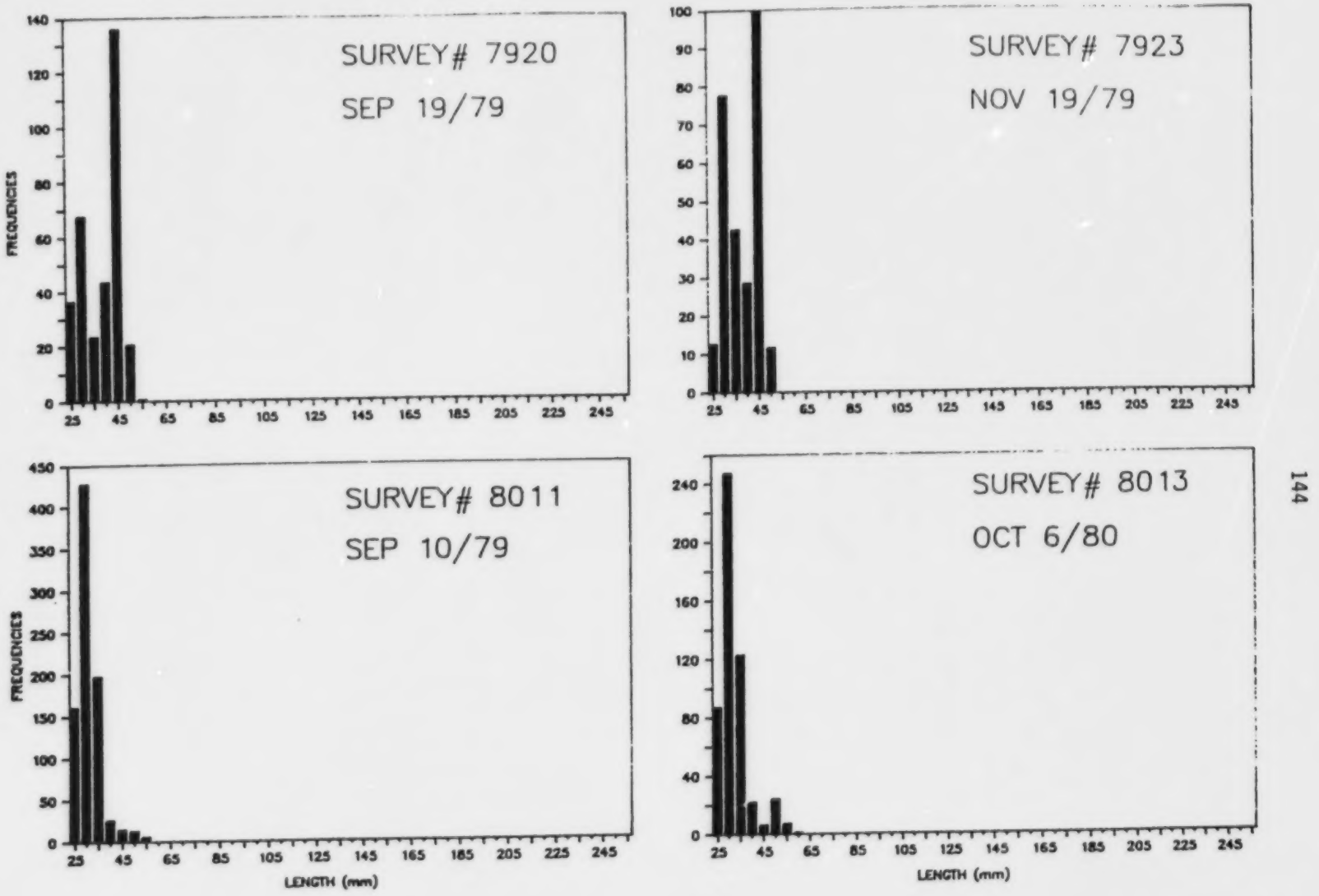


Fig 25b. Continued

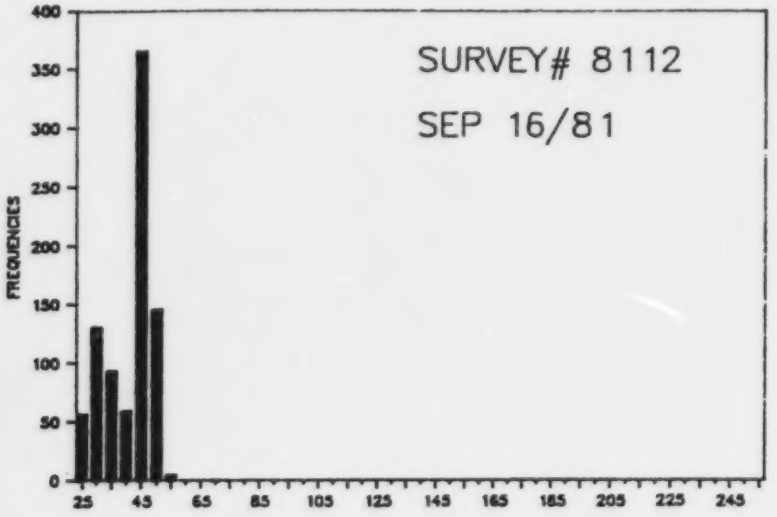


Fig 25b. Continued

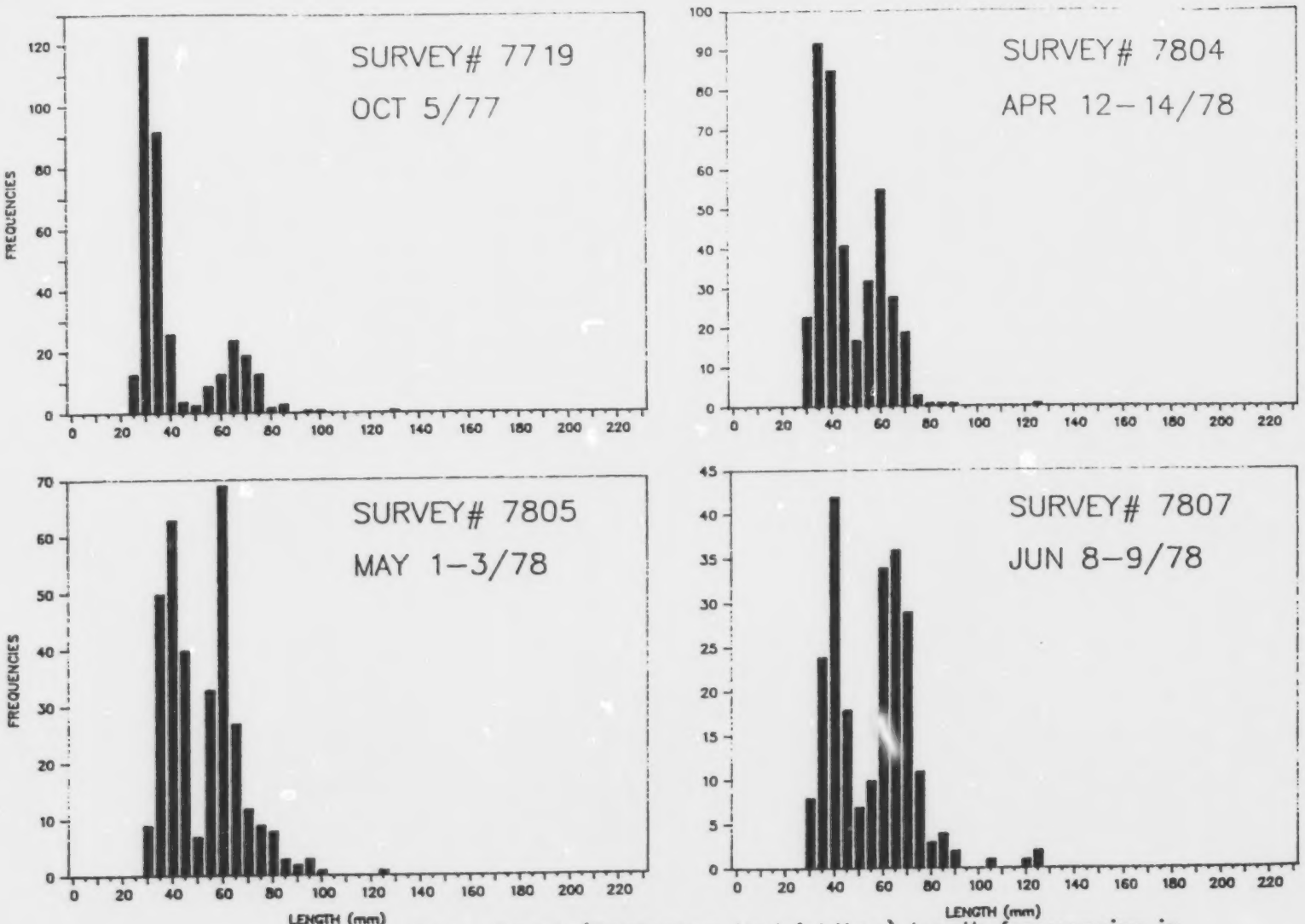


Fig. 25c. Smelt (Spirinchus thaleichthys) length frequencies in Pitt Lake

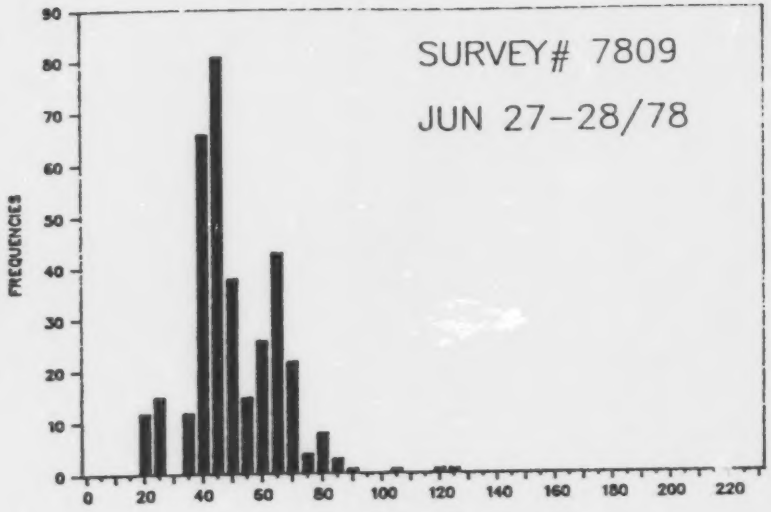


Fig. 25c. Continued

Fig. 26. Map of Harrison Lake showing areas and transects.

Table 14a - Tow summary for Harrison Lake

SURVEY #	SAMPLE DATE	TOW	AREA	SAMPLE TIME	DURATION (min)	DEPTH (m)	SKY CODE	LIGHT CODE	WIND DIR	SURFACE TEMP (C)	CATCH
7501	MAR 13/75	750001	2			44					65 SMELT
	MAR 13/75	750002	2	20:00	15	20					20 SMELT
	MAR 13/75	750003	2	22:00	20	62					2 AGE 1
											45 SMELT
	MAR 13/75	750004	2	22:30		80					10 SMELT
	MAR 13/75	750005	2								NONE
7507	JUL 24/75	750016	2			30					NONE
											NONE
	JUL 24/75	750017	2			20					2 AGE 1
	JUL 24/75	750018	2			20					NONE
	JUL 24/75	750019	2		40	20					NONE
	JUL 25/75	750020	3			30					NONE
7510	AUG 14/75	750029	1			28					194 AGE 0
											1 AGE 1
	AUG 14/75	750030	3			30					4 AGE 0
											1 AGE 1
	AUG 14/75	750031	1			28					328 AGE 0
											7 AGE 1
	AUG 15/75	750032	2			30					20 AGE 0
											4 AGE 1
7512	SEP 5/75	750036				25					28 AGE 0
	SEP 9/75	750037	1			12					1 AGE 0
	SEP 9/75	750038	1			25					3 AGE 0
	SEP 10/75	750039	3			45					17 AGE 0
											9 AGE 1
7522	NOV 20/75	750059	1			45					22 AGE 0
											7 AGE 1
	NOV 20/75	750060	3			45					16 AGE 0
											1 AGE 1
7602	APR 1/76	760004									20 AGE 1
											2 SMELT
											1 STICKLEBACK
7709	JUL 15/77	770019	3		40	32					46 AGE 0
7720	OCT 6/77	770051	1		5	25					321 SMELT
	OCT 6/77	770052	1			4					6 AGE 0
											9 SMELT
	OCT 6/77	770053	2		10	38					47 AGE 0
											123 SMELT
											7 STICKLEBACK

Table 14a - Tow summary for Harrison Lake

SURVEY #	SAMPLE DATE	TOW	AREA	SAMPLE TIME	DURATION (min)	DEPTH (m)	SKY CODE	LIGHT CODE	WIND DIR	SURFACE TEMP (C)	CATCH
	OCT 6/77	770054	3		12	25					3 AGE 0 120 SMELT 353 STICKLEBACK
7827	OCT 30/78	780121	1	19:25	5	16		1	3 0	10.5	256 SMELT 1 STICKLEBACK
	OCT 30/78	780122	2	22:00	5	36		1	3 1	11.0	1 AGE 0 81 STICKLEBACK
	OCT 31/78	780123	3	00:35	15	24		1	3 0	11.5	72 SMELT 235 STICKLEBACK
7916	JUL 31/79	790068	1	22:10	10	30		1	3 0	18.0	10 AGE 0 1 OTHER 82 SMELT 9 STICKLEBACK
	JUL 31/79	790069	1	22:40	7	7		1	3 0	18.0	2 AGE 0 106 SMELT 6 STICKLEBACK
	AUG 1/79	790070	2	01:45	10	30		1	3 0	18.0	23 AGE 0 21 SMELT 37 STICKLEBACK
	AUG 1/79	790071	2	02:15	5	15		1	3 0	18.0	9 AGE 0 33 SMELT 50 STICKLEBACK
	AUG 1/79	790072	3	22:00	15	30		3	3 3	17.0	6 AGE 0 80 SMELT 2 STICKLEBACK
	AUG 2/79	790073	3	01:43	15	30		3	3 3	16.5	9 AGE 0 4 SMELT
7924	NOV 26/79	790123	3	18:35	20	52		1	3 0	9.0	48 AGE 0 53 SMELT 34 STICKLEBACK
	NOV 26/79	790124	3	19:25	5	22		1	3 0	9.0	1 AGE 0 65 SMELT 56 STICKLEBACK
	NOV 26/79	790125	2	22:42	20	52		2	3 8	9.0	25 AGE 0 1 AGE 1 62 SMELT 3 STICKLEBACK
7924	NOV 26/79	790126	2	23:27	5	22		2	3 8	9.0	1 AGE 0 35 SMELT 20 STICKLEBACK

Table 14a - Tow summary for Harrison Lake

SURVEY #	SAMPLE DATE	TOW	AREA	SAMPLE TIME	DURATION (min)	DEPTH (m)	SKY CODE	LIGHT CODE	WIND DIR	SURFACE TEMP (C)	CATCH
	NOV 27/79	790127	1	02:33	20	52		1	3 6	8.0	3 AGE 0 119 SMELT 14 STICKLEBACK
	NOV 27/79	790128	1	03:24	5	30		1	3 6	8.0	220 SMELT 8 STICKLEBACK
8008	JUL 29/80	800030	1	23:00	5	22		1	4 0	17.5	99 SMELT
	JUL 31/80	800031	2	21:20	20	22		2	3 3	17.0	23 SMELT 2 STICKLEBACK
	AUG 1/80	800032	3	01:13	20	22		3	3 3	17.0	1 AGE 0 11 STICKLEBACK
8012	SEP 24/80	800045	1	19:55	10	30		1	5 0	15.5	1 AGE 1 49 SMELT 1 STICKLEBACK
	SEP 24/80	800046	1	20:20	3	15		1	5 0	15.5	45 SMELT
	SEP 24/80	800047	2	23:05	5	37		1	5 8	15.0	10 AGE 0 53 SMELT 10 STICKLEBACK
	SEP 25/80	800048	3	01:30	15	37		1	5 0	15.0	4 AGE 0 40 SMELT 8 STICKLEBACK
8016	NOV 13/80	800069	1	19:20	20	52		2	3 6	10.0	5 AGE 0 229 SMELT 1 STICKLEBACK
	NOV 13/80	800070	1	20:05	5	22		2	3 6	10.0	129 SMELT 2 STICKLEBACK
	NOV 14/80	800071	2	00:20	10	15		1	3 6	10.0	1 AGE 0 22 SMELT 19 STICKLEBACK
	NOV 14/80	800072	2	00:35	3	44		1	3 6	10.0	3 AGE 0 295 SMELT 14 STICKLEBACK
	NOV 14/80	800073	3	03:00	5	15		1	3 0	10.0	20 SMELT 21 STICKLEBACK
	NOV 14/80	800074	3	03:20	1	37		1	3 0	10.0	314 SMELT 32 STICKLEBACK
8114	OCT 15/81	810040	1	20:03	20	37		1	3 0	11.5	1 AGE 0 2 AGE 1 186 SMELT
	OCT 16/81	810041	2	00:33	20	25		1	3 0	13.0	403 SMELT 19 STICKLEBACK

Table 14a - Tow summary for Harrison Lake

SURVEY #	SAMPLE DATE	TOW	AREA	SAMPLE TIME	DURATION (min)	DEPTH (m)	SKY CODE	LIGHT CODE	WIND DIR	SURFACE TEMP (C)	CATCH
8114	OCT 16/81	810042	3	03:30	10	7		1	3 0	13.0	86 SMELT
											231 STICKLEBACK
8205	JUL 27/82	820019	1	22:31	3	7		2	3 0	16.5	177 SMELT
	JUL 28/82	820020	2	01:58	5	7		2	3 0	20.5	109 SMELT
8206	AUG 3/82	820021	3	21:12	20	25		3	4 0	15.0	3 AGE 0
											566 SMELT
	AUG 4/82	820022	3	00:30	20	19		3	3 3	14.0	1 AGE 0
											32 SMELT
											22 STICKLEBACK
8303	NOV 14/83	830026	1	19:00	10	13		6	3 0	11.0	33 SMELT
	NOV 14/83	830027	1	19:20	20	61		6	3 0	11.0	7 AGE 0
											19 SMELT
											2 STICKLEBACK
	NOV 14/83	830028	2	22:50	20	61		6	3 7	11.0	32 AGE 0
											2 AGE 1
											26 SMELT
											11 STICKLEBACK
	NOV 14/83	830029	2	23:15	10	13		6	3 7	11.0	1 AGE 0
											12 SMELT
											6 STICKLEBACK
	NOV 15/83	830030	3	22:00	20	67		6	3 7	11.0	30 AGE 0
											13 SMELT
											5 STICKLEBACK
8501	AUG 14/85	850001	1	20:30	5	13		1	4 3	18.0	3 AGE 0
											90 SMELT
	AUG 14/85	850002	2	22:10	20	37		1	4 3	18.0	6 AGE 0
											57 SMELT
	AUG 14/85	850003	2	23:00	5	19		1	4 3	18.0	134 SMELT
	AUG 14/85	850004	3	24:00	10	13		1	4 3	18.0	18 AGE 0
											61 SMELT
											2 STICKLEBACK
	AUG 15/85	850005	3	20:45	20	25		1	4 3	18.	23 AGE 0
											154 SMELT
											1 STICKLEBACK

Table 14b - Trawl statistics by survey for Harrison Lake

SURVEY#	DATES	CATCH		LENGTH (mm)					WEIGHT (g)				
		SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
7501	MAR 13/75	AGE 1	2	94.50	99	90	4.50	20.25	10.02	12.34	7.71	2.32	5.36
		SMELT	140	47.22	66	34	8.74	76.37	0.73	1.89	0.18	0.47	0.23
7507	JUL 24-25/75	AGE 1	3	79.33	90	70	8.22	67.56	6.95	10.49	4.24	2.62	6.85
7510	AUG 14-15/75	AGE 0	546	54.39	69	43	4.42	19.55	1.87	4.49	0.96	0.49	0.24
		AGE 1	13	78.15	91	71	6.17	38.13	6.01	8.40	4.10	1.19	1.42
7512	SEP 5-10/75	AGE 0	49	58.41	70	46	7.14	50.94	2.43	4.24	0.90	0.95	0.91
		AGE 1	9	84.67	91	77	4.24	18.00	7.82	10.46	5.51	1.42	2.01
7522	NOV 20/75	AGE 0	38	64.42	77	43	7.97	63.56	3.08	4.98	0.85	1.09	1.20
		AGE 1	8	86.38	91	80	4.06	16.48	7.10	8.69	4.94	1.30	1.69
7602	APR 1/76	AGE 1	20	79.10	98	70	7.94	63.09	5.14	9.63	3.23	1.88	3.53
		SMELT	2	38.50	39	38	0.50	0.25	0.22	0.26	0.19	0.04	0.00
		STICKLEBACK	1	50.00	50	50	0.00	0.00	1.18	1.18	1.18	0.00	0.00
7709	JUL 15/77	AGE 0	46	73.13	85	54	5.56	30.94	4.81	7.46	1.79	1.10	1.20
7720	OCT 6/77	AGE 0	56	69.52	94	36	7.98	63.61	3.95	9.33	0.24	1.41	1.99
		SMELT	573	41.49	139	23	15.17	230.22	0.71	19.00	0.03	1.52	2.31
		STICKLEBACK	360	32.69	86	21	5.96	35.47	0.39	8.96	0.10	0.50	0.25
7827	OCT 30-31/78	AGE 0	1	78.00	78	78	0.00	0.00	6.17	6.17	6.17	0.00	0.00
		SMELT	479	33.78	125	24	8.81	77.67	0.30	15.44	0.01	1.00	1.00
		STICKLEBACK	317	33.76	73	18	8.15	66.39	0.50	2.22	0.09	0.36	0.13
7916	JUL 31-AUG 2/79	AGE 0	59	69.08	83	45	9.91	98.28	4.25	6.63	1.04	1.45	2.09
		OTHER	1	88.00	88	88	0.00	0.00	11.05	11.05	11.05	0.00	0.00
		SMELT	326	46.74	121	25	13.11	171.83	0.98	13.46	0.06	1.26	1.59
		STICKLEBACK	105	52.90	62	24	4.01	16.11	2.01	2.76	0.16	0.37	0.13

Table 14b - Trawl statistics by survey for Harrison Lake

SURVEY#	DATES	CATCH		LENGTH (mm)					WEIGHT (g)				
		SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
7924	NOV 26-27/79	AGE 0	78	78.76	92	63	5.63	31.72	5.66	8.45	2.39	1.25	1.57
		AGE 1	1	81.00	81	81	0.00	0.00	6.42	6.42	6.42	0.00	0.00
		SMELT	554	48.66	142	21	12.63	159.55	1.00	26.00	0.07	1.62	2.64
		STICKLEBACK	135	40.75	60	23	10.85	117.64	0.86	2.35	0.11	0.63	0.40
8008	JUL 29-AUG 1/80	AGE 0	1	65.00	65	65	0.00	0.00	3.62	3.62	3.62	0.00	0.00
		SMELT	122	50.95	94	20	14.26	203.34	1.25	6.64	0.01	0.96	0.92
		STICKLEBACK	13	51.15	57	45	3.32	11.05	1.89	2.40	1.61	0.21	0.05
8012	SEP 24-25/80	AGE 0	14	76.43	95	69	7.55	56.96	5.88	10.42	4.17	1.88	3.54
		AGE 1	1	138.00	138	138	0.00	0.00	37.67	37.67	37.67	0.00	0.00
		SMELT	187	35.22	80	24	11.87	140.87	0.42	4.37	0.04	0.69	0.47
		STICKLEBACK	19	49.42	60	28	9.12	83.09	1.62	2.84	0.29	0.70	0.50
8016	NOV 13-14/80	AGE 0	9	76.44	89	63	8.30	68.91	5.38	8.40	2.52	1.70	2.89
		SMELT	1009	33.97	100	24	9.40	88.34	0.35	8.98	0.01	0.83	0.69
		STICKLEBACK	89	49.25	60	24	7.83	61.33	1.50	2.66	0.17	0.59	0.34
8114	OCT 15-16/81	AGE 0	1	91.00	91	91	0.00	0.00	8.47	8.47	8.47	0.00	0.00
		AGE 1	2	84.50	85	84	0.50	0.25	7.78	7.90	7.65	0.13	0.02
		SMELT	675	42.68	139	20	11.93	142.23	0.63	25.82	0.01	1.13	1.28
		STICKLEBACK	250	37.10	91	25	8.11	65.77	0.66	9.72	0.10	0.71	0.51
8205	JUL 27-28/82	SMELT	286	35.02	92	18	15.47	239.28	0.50	6.19	0.01	0.90	0.81
8206	AUG 3-4/82	AGE 0	4	76.75	82	73	3.34	11.19	5.80	6.73	4.66	0.75	0.56
		SMELT	598	25.67	85	19	6.10	37.21	0.08	5.01	0.01	0.28	0.08
		STICKLEBACK	22	52.45	57	48	1.99	3.98	1.60	2.11	1.14	0.23	0.05

Table 14b - Trawl statistics by survey for Harrison Lake

SURVEY#	DATES	CATCH		LENGTH (mm)					WEIGHT (g)				
		SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
8303	NOV 14-15/83	AGE 0	70	77.10	91	34	10.15	103.03	5.36	8.20	0.13	1.66	2.75
		AGE 1	2	70.50	71	70	0.50	0.25	3.88	3.94	3.82	0.06	0.00
		SMELT	103	63.13	140	30	26.67	711.06	3.19	22.68	0.16	4.54	20.62
		STICKLEBACK	26	44.96	63	31	7.55	57.04	1.00	1.99	0.29	0.51	0.26
8501	AUG 14-15/85	AGE 0	50	61.32	85	32	12.76	162.74	3.05	7.87	0.18	1.81	3.26
		SMELT	496	47.74	137	28	10.09	101.85	0.92	19.69	0.09	1.10	1.20
		STICKLEBACK	3	49.00	49	49	0.00	0.00	1.35	1.43	1.31	0.06	0.00

Table 14c - Trawl statistics by tow for Harrison Lake

TRAWL					CATCH		LENGTH (mm)					WEIGHT (g)				
AREA	DATE	TOW	DEPTH (m)	DURATION (min)	SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
SURVEY # 7501																
2	MAR 13/75	750001	44		SMELT	65	46.32	63	34	8.28	68.53	0.70	1.67	0.19	0.44	0.20
2	MAR 13/75	750002	20	15	SMELT	20	51.15	66	35	10.12	102.43	0.93	1.89	0.18	0.54	0.29
2	MAR 13/75	750003	62	20	AGE 1	2	94.50	99	90	4.50	20.25	10.02	12.34	7.71	2.32	5.36
					SMELT	45	47.04	66	35	8.50	72.26	0.71	1.84	0.20	0.49	0.24
2	MAR 13/75	750004	80		SMELT	10	46.00	61	35	7.48	56.00	0.64	1.48	0.18	0.39	0.15
2	MAR 13/75	750005			NONE											
SURVEY # 7507																
2	JUL 24/75	750016	30		NONE											
2	JUL 24/75	750017	20		AGE 1	2	74.00	78	70	4.00	16.00	5.18	6.13	4.24	0.94	0.89
2	JUL 24/75	750018	20		NONE											
2	JUL 24/75	750019	20	40	NONE											
3	JUL 25/75	750020	30		NONE											
SURVEY # 7510																
1	AUG 14/75	750029	28		AGE 0	194	53.36	65	43	4.20	17.65	1.72	3.05	0.96	0.41	0.17
					AGE 1	1	83.00	83	83	0.00	0.00	7.10	7.10	7.10	0.00	0.00
3	AUG 14/75	750030	30		AGE 0	4	64.75	69	61	2.86	8.19	3.53	4.49	2.99	0.59	0.35
					AGE 1	1	71.00	71	71	0.00	0.00	4.10	4.10	4.10	0.00	0.00
1	AUG 14/75	750031	28		AGE 0	328	54.55	67	44	4.16	17.33	1.90	3.82	0.97	0.46	0.21
					AGE 1	7	80.57	91	72	6.54	42.82	6.46	8.40	4.96	1.20	1.44
2	AUG 15/75	750032	30		AGE 0	20	59.85	68	52	3.80	14.43	2.52	3.83	1.62	0.50	0.26
					AGE 1	4	74.50	77	71	2.60	6.75	5.42	5.94	4.90	0.43	0.19

Table 14c - Trawl statistics by tow for Harrison Lake

TRAWL					CATCH		LENGTH (mm)					WEIGHT (g)				
AREA	DATE	TOW	DEPTH (m)	DURATION (min)	SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
SURVEY # 7512																
	SEP 5/75	750036	25		AGE 0	28	54.96	70	48	5.34	28.46	1.97	4.01	1.12	0.69	0.47
1	SEP 9/75	750037	12		AGE 0	1	46.00	46	46	0.00	0.00	1.00	1.00	1.00	0.00	0.00
1	SEP 9/75	750038	25		AGE 0	3	55.00	66	46	8.29	68.67	2.00	3.50	0.90	1.10	1.21
3	SEP 10/75	750039	45		AGE 0	17	65.41	70	60	2.85	8.12	3.37	4.24	2.63	0.48	0.23
					AGE 1	9	84.67	91	77	4.24	18.00	7.82	10.46	5.51	1.42	2.01
SURVEY # 7522																
1	NOV 20/75	750059	45		AGE 0	22	64.55	77	46	7.95	63.16	3.15	4.98	1.13	1.18	1.39
					AGE 1	7	85.86	91	80	4.09	16.69	7.07	8.69	4.94	1.39	1.93
3	NOV 20/75	750060	45		AGE 0	16	64.25	74	43	8.00	64.06	2.99	4.38	0.85	0.96	0.91
					AGE 1	1	90.00	90	90	0.00	0.00	7.27	7.27	7.27	0.00	0.00
SURVEY # 7602																
	APR 1/76	760004			AGE 1	20	79.10	98	70	7.94	63.09	5.14	9.63	3.23	1.88	3.53
					SMELT	2	38.50	39	38	0.50	0.25	0.22	0.26	0.19	0.04	0.00
					STICKLEBACK	1	50.00	50	50	0.00	0.00	1.18	1.18	1.18	0.00	0.00
SURVEY # 7709																
3	JUL 15/77	770019	32	40	AGE 0	46	73.13	85	54	5.56	30.94	4.81	7.46	1.79	1.10	1.20
SURVEY # 7720																
1	OCT 6/77	770051	25	5	SMELT	321	39.77	119	27	13.66	186.57	0.58	11.67	0.07	1.20	1.43
1	OCT 6/77	770052	4		AGE 0	6	77.00	94	67	9.97	99.33	5.51	9.33	3.52	2.22	4.94
					SMELT	9	52.00	74	33	13.52	182.89	1.20	3.04	0.15	0.87	0.76

Table 14c - Trawl statistics by tow for Harrison Lake

TRAWL					CATCH		LENGTH (mm)					WEIGHT (g)				
AREA	DATE	TOW	DEPTH (m)	DURATION (min)	SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
2	OCT 6/77	770053	38	10	AGE 0	47	69.32	90	62	5.54	30.69	3.84	8.34	2.59	1.04	1.07
					SMELT	123	51.48	139	28	17.39	302.27	1.32	19.00	0.09	2.31	5.33
					STICKLEBACK	7	40.29	54	32	6.25	39.06	0.72	1.86	0.28	0.48	0.23
3	OCT 6/77	770054	25	12	AGE 0	3	57.67	74	36	15.97	254.89	2.67	5.02	0.24	1.95	3.81
					SMELT	120	35.03	115	23	10.79	116.52	0.38	11.22	0.03	1.06	1.13
					STICKLEBACK	353	32.54	86	21	5.85	34.24	0.39	8.96	0.10	0.50	0.25
SURVEY # 7827																
1	OCT 30/78	780121	16	5	SMELT	256	32.47	125	24	6.93	48.03	0.24	15.44	1.E-2	0.96	0.92
					STICKLEBACK	1	48.00	48	48	0.00	0.00	1.14	1.14	1.14	0.00	0.00
2	OCT 30/78	780122	36	5	AGE 0	1	78.00	78	78	0.00	0.00	6.17	6.17	6.17	0.00	0.00
					STICKLEBACK	81	40.90	73	25	8.04	64.66	0.79	1.99	0.21	0.42	0.17
3	OCT 31/78	780123	24	15	SMELT	72	39.74	123	27	14.68	215.61	0.67	12.65	0.09	1.73	3.01
					STICKLEBACK	235	31.23	58	18	6.52	42.45	0.40	2.22	0.09	0.27	0.07
SURVEY # 7916																
1	JUL 31/79	790068	30	10	AGE 0	10	51.40	56	45	4.00	16.04	1.75	2.37	1.14	0.41	0.17
					OTHER	1	88.00	88	88	0.00	0.00	11.05	11.05	11.05	0.00	0.00
					SMELT	82	50.91	69	38	4.47	20.00	1.05	2.34	0.42	0.31	0.09
					STICKLEBACK	9	52.00	57	42	5.10	26.00	1.93	2.48	0.88	0.57	0.32
1	JUL 31/79	790069	7	7	AGE 0	2	47.00	49	45	2.00	4.00	1.25	1.46	1.04	0.21	0.04
					SMELT	106	45.33	103	25	11.66	135.86	0.88	12.10	0.06	1.18	1.40
					STICKLEBACK	6	50.17	60	24	12.06	145.47	1.77	2.45	0.16	0.74	0.55
2	AUG 1/79	790070	30	10	AGE 0	23	73.57	83	65	3.37	11.38	4.69	5.83	3.29	0.57	0.33
					SMELT	21	46.33	110	25	22.88	523.27	1.39	9.82	0.06	2.44	5.95
					STICKLEBACK	37	53.51	62	48	2.64	6.95	1.99	2.76	1.48	0.29	0.08
2	AUG 1/79	790071	15	5	AGE 0	9	75.56	79	72	2.11	4.47	5.49	6.63	4.79	0.52	0.27
					SMELT	33	46.97	80	29	16.17	261.36	1.08	4.09	0.10	1.07	1.15
					STICKLEBACK	50	52.98	58	47	2.09	4.38	2.08	2.75	1.42	0.26	0.07

Table 14c - Trawl statistics by tow for Harrison Lake

TRAWL					CATCH		LENGTH (mm)					WEIGHT (g)				
AREA	DATE	TOW	DEPTH (m)	DURATION (min)	SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
3	AUG 1/79	790072	30	15	AGE 0	6	70.67	73	69	1.25	1.56	4.46	4.88	4.09	0.24	0.06
					SMELT	80	44.38	121	25	14.46	209.01	0.87	13.46	0.06	1.52	2.30
					STICKLEBACK	2	52.50	57	48	4.50	20.25	1.76	2.27	1.25	0.51	0.26
3	AUG 2/79	790073	30	15	AGE 0	9	74.67	80	69	3.02	9.11	5.17	6.38	3.81	0.72	0.52
					SMELT	4	45.75	77	28	19.65	386.19	1.21	3.75	0.10	1.50	2.24
SURVEY # 7924																
3	NOV 26/79	790123	52	20	AGE 0	48	79.08	88	68	5.11	26.16	5.71	7.88	3.74	1.16	1.35
					SMELT	53	50.77	73	32	8.39	70.40	0.92	2.72	0.11	0.52	0.27
					STICKLEBACK	34	38.32	60	24	10.60	112.45	0.68	2.15	0.11	0.57	0.33
3	NOV 26/79	790124	22	5	AGE 0	1	75.00	75	75	0.00	0.00	4.76	4.76	4.76	0.00	0.00
					SMELT	65	52.78	78	31	6.97	48.60	1.16	3.54	0.18	0.44	0.20
					STICKLEBACK	56	37.11	57	23	9.96	99.13	0.67	1.99	0.14	0.54	0.29
2	NOV 26/79	790125	52	20	AGE 0	25	78.36	92	63	6.70	44.95	5.56	8.45	2.39	1.45	2.09
					AGE 1	1	81.00	81	81	0.00	0.00	6.42	6.42	6.42	0.00	0.00
					SMELT	62	52.76	130	32	13.69	187.44	1.29	12.41	0.16	1.59	2.52
					STICKLEBACK	3	55.33	57	54	1.25	1.56	1.67	1.72	1.60	0.05	0.00
2	NOV 26/79	790126	22	5	AGE 0	1	71.00	71	71	0.00	0.00	4.48	4.48	4.48	0.00	0.00
					SMELT	35	51.83	117	21	17.93	321.46	1.61	13.94	0.19	2.51	6.32
					STICKLEBACK	20	43.55	58	27	9.27	85.95	1.00	2.23	0.21	0.61	0.37
1	NOV 27/79	790127	52	20	AGE 0	3	80.67	81	80	0.47	0.22	6.29	7.27	5.38	0.77	0.60
					SMELT	119	46.35	142	30	13.27	175.99	0.93	26.00	0.09	2.37	5.63
					STICKLEBACK	14	52.00	60	33	6.94	48.14	1.57	2.35	0.37	0.49	0.24
1	NOV 27/79	790128	30	5	SMELT	220	46.52	132	28	12.30	151.40	0.83	15.45	0.07	1.28	1.63
					STICKLEBACK	8	44.38	56	33	7.86	61.73	1.02	1.90	0.39	0.58	0.33
SURVEY # 8008																
1	JUL 29/80	800030	22	5	SMELT	99	53.65	94	20	13.00	169.04	1.40	6.64	0.02	0.95	0.90
2	JUL 31/80	800031	22	20	SMELT	23	39.35	60	23	13.61	185.10	0.58	1.86	0.02	0.67	0.45
					STICKLEBACK	2	54.50	55	54	0.50	0.25	1.98	2.06	1.90	0.08	0.00
3	AUG 1/80	800032	22	20	AGE 0	1	65.00	65	65	0.00	0.00	3.62	3.62	3.62	0.00	0.00
					STICKLEBACK	11	50.55	57	45	3.26	10.61	1.87	2.40	1.61	0.23	0.05

Table 14c - Trawl statistics by tow for Harrison Lake

TRAWL					CATCH		LENGTH (mm)					WEIGHT (g)				
AREA	DATE	TOW	DEPTH (m)	DURATION (min)	SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
SURVEY # 8012																
1	SEP 24/80	800045	30	10	AGE 1	1	138.00	138	138	0.00	0.00	37.67	37.67	37.67	0.00	0.00
					SMELT	49	36.33	73	26	11.46	131.32	0.42	3.14	0.04	0.65	0.43
					STICKLEBACK	1	54.00	54	54	0.00	0.00	1.66	1.66	1.66	0.00	0.00
1	SEP 24/80	800046	15	3	SMELT	45	33.82	80	24	13.05	170.24	0.43	4.37	0.05	0.86	0.73
2	SEP 24/80	800047	37	5	AGE 0	10	75.60	93	70	6.20	38.44	5.59	10.06	4.17	1.61	2.60
					SMELT	53	38.09	72	25	13.94	194.39	0.58	2.68	0.04	0.75	0.56
					STICKLEBACK	10	53.60	60	47	4.76	22.64	1.97	2.84	1.20	0.50	0.25
3	SEP 25/80	800048	37	15	AGE 0	4	78.50	95	69	9.86	97.25	6.63	10.42	4.51	2.26	5.12
					SMELT	40	31.65	42	25	4.61	21.23	0.17	0.52	0.04	0.12	0.01
					STICKLEBACK	8	43.63	55	28	10.53	110.98	1.19	2.23	0.29	0.73	0.53
SURVEY # 8016																
1	NOV 13/80	800069	52	20	AGE 0	5	78.60	89	64	9.00	81.04	5.95	8.40	3.19	1.77	3.14
					SMELT	229	35.56	98	26	11.26	126.89	0.46	7.80	0.11	1.07	1.15
					STICKLEBACK	1	44.00	44	44	0.00	0.00	0.90	0.90	0.90	0.00	0.00
1	NOV 13/80	800070	22	5	SMELT	129	35.37	89	25	10.13	102.64	0.44	5.48	0.06	0.68	0.46
					STICKLEBACK	2	47.50	55	40	7.50	56.25	1.37	1.93	0.81	0.56	0.31
2	NOV 14/80	800071	15	10	AGE 0	1	75.00	75	75	0.00	0.00	5.25	5.25	5.25	0.00	0.00
					SMELT	22	44.59	98	28	21.27	452.51	1.38	8.00	0.14	2.27	5.17
					STICKLEBACK	19	47.53	56	24	9.34	87.20	1.47	2.40	0.20	0.64	0.41
2	NOV 14/80	800072	44	3	AGE 0	3	73.33	79	63	7.32	53.56	4.46	5.92	2.52	1.43	2.04
					SMELT	295	33.65	100	24	8.96	80.28	0.32	8.98	0.00	0.76	0.58
					STICKLEBACK	14	53.00	60	40	4.61	21.29	1.71	2.28	0.86	0.34	0.11
3	NOV 14/80	800073	15	5	SMELT	20	30.65	34	28	2.15	4.63	0.14	0.22	0.05	0.05	0.00
					STICKLEBACK	21	48.19	58	25	8.22	67.58	1.41	2.48	0.17	0.62	0.39

Table 14c - Trawl statistics by tow for Harrison Lake

TRAWL					CATCH		LENGTH (mm)					WEIGHT (g)				
AREA	DATE	TOW	DEPTH (m)	DURATION (min)	SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
3	NOV 14/80	800074	37	1	SMELT	314	31.99	92	24	5.14	26.46	0.20	7.19	0.03	0.42	0.17
					STICKLEBACK	32	49.59	57	31	7.20	51.80	1.50	2.66	0.34	0.59	0.35
SURVEY # 8114																
1	OCT 15/81	810040	37	20	AGE 0	1	91.00	91	91	0.00	0.00	8.47	8.47	8.47	0.00	0.00
					AGE 1	2	84.50	85	84	0.50	0.25	7.78	7.90	7.65	0.13	0.02
					SMELT	186	44.49	83	26	12.80	163.71	0.77	4.29	0.04	0.80	0.64
2	OCT 16/81	810041	25	20	SMELT	403	40.68	139	20	11.54	133.24	0.54	25.82	0.00	1.34	1.80
					STICKLEBACK	19	48.84	91	28	13.90	193.29	1.63	9.72	0.21	2.00	4.02
3	OCT 16/81	810042	7	10	SMELT	86	48.16	60	27	9.05	81.97	0.76	1.41	0.06	0.39	0.15
					STICKLEBACK	231	36.14	58	25	6.56	43.02	0.58	2.14	0.10	0.37	0.14
SURVEY # 8205																
1	JUL 27/82	820019	7	3	SMELT	177	37.29	92	20	17.29	298.88	0.66	6.19	0.02	1.04	1.09
2	JUL 28/82	820020	7	5	SMELT	109	31.33	74	18	10.98	120.51	0.25	3.44	0.02	0.50	0.25
SURVEY # 8206																
3	AUG 3/82	820021	25	20	AGE 0	3	78.00	82	75	2.94	8.67	6.17	6.73	5.71	0.42	0.18
					SMELT	566	25.28	85	19	5.43	29.45	0.07	5.01	0.02	0.26	0.07
3	AUG 4/82	820022	19	20	AGE 0	1	73.00	73	73	0.00	0.00	4.66	4.66	4.66	0.00	0.00
					SMELT	32	32.66	61	21	11.09	122.98	0.29	1.62	0.02	0.45	0.21
					STICKLEBACK	22	52.45	57	48	1.99	3.98	1.60	2.11	1.14	0.23	0.05
SURVEY # 8303																
1	NOV 14/83	830026	13	10	SMELT	33	69.15	130	31	29.23	854.25	4.27	16.63	0.20	5.11	26.12
					STICKLEBACK	2	53.50	56	51	2.50	6.25	1.71	1.97	1.45	0.26	0.07

Table 14c - Trawl statistics by tow for Harrison Lake

TRAWL					CATCH		LENGTH (mm)					WEIGHT (g)				
AREA	DATE	TOW	DEPTH (m)	DURATION (min)	SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
1	NOV 14/83	830027	61	20	AGE 0	7	77.43	88	64	8.86	78.53	5.64	7.89	2.52	2.15	4.62
					SMELT	19	56.00	105	33	23.99	575.58	2.15	8.62	0.19	2.73	7.46
					STICKLEBACK	2	44.00	51	37	7.00	49.00	0.90	1.29	0.52	0.38	0.15
2	NOV 14/83	830028	61	20	AGE 0	32	80.44	91	63	7.26	52.75	5.58	7.50	2.27	1.40	1.97
					AGE 1	2	70.50	71	70	0.50	0.25	3.88	3.94	3.82	0.06	0.00
					SMELT	26	63.08	140	34	25.03	626.38	3.07	22.68	0.19	5.25	27.56
					STICKLEBACK	11	45.82	63	38	7.58	57.42	0.97	1.99	0.51	0.48	0.23
2	NOV 14/83	830029	13	10	AGE 0	1	67.00	67	67	0.00	0.00	4.20	4.20	4.20	0.00	0.00
					SMELT	12	68.00	128	30	31.24	976.00	4.05	14.91	0.26	4.79	22.95
					STICKLEBACK	6	44.67	53	39	4.64	21.56	0.95	1.54	0.55	0.33	0.11
3	NOV 15/83	830030	67	20	AGE 0	30	73.80	89	34	11.82	139.63	5.09	8.20	0.13	1.75	3.06
					SMELT	13	53.85	90	34	14.00	195.98	1.43	5.21	0.16	1.22	1.50
					STICKLEBACK	5	40.40	55	31	8.38	70.24	0.88	1.99	0.29	0.62	0.38
SURVEY # 8501																
1	AUG 14/85	850001	13	5	AGE 0	3	59.67	63	58	2.36	5.56	2.52	2.87	2.32	0.25	0.06
					SMELT	90	42.71	137	28	14.80	218.92	0.87	19.69	0.09	2.19	4.80
2	AUG 14/85	850002	37	20	AGE 0	6	81.83	85	80	2.03	4.14	6.89	7.87	6.00	0.68	0.47
					SMELT	57	47.75	63	31	7.45	55.55	0.89	2.10	0.20	0.44	0.19
2	AUG 14/85	850003	19	5	SMELT	134	46.84	60	28	8.46	71.56	0.83	1.96	0.11	0.46	0.21
3	AUG 14/85	850004	13	10	AGE 0	18	51.28	68	32	13.87	192.31	1.79	3.85	0.18	1.47	2.16
					SMELT	61	51.74	58	34	3.42	11.67	1.09	1.67	0.23	0.22	0.05
					STICKLEBACK	2	49.00	49	49	0.00	0.00	1.37	1.43	1.31	0.06	0.00
3	AUG 15/85	850005	25	20	AGE 0	23	64.04	68	58	2.24	5.00	3.11	3.61	2.52	0.35	0.12
					SMELT	154	49.86	109	32	9.29	86.33	0.96	8.81	0.13	0.88	0.77
					STICKLEBACK	1	49.00	49	49	0.00	0.00	1.31	1.31	1.31	0.00	0.00

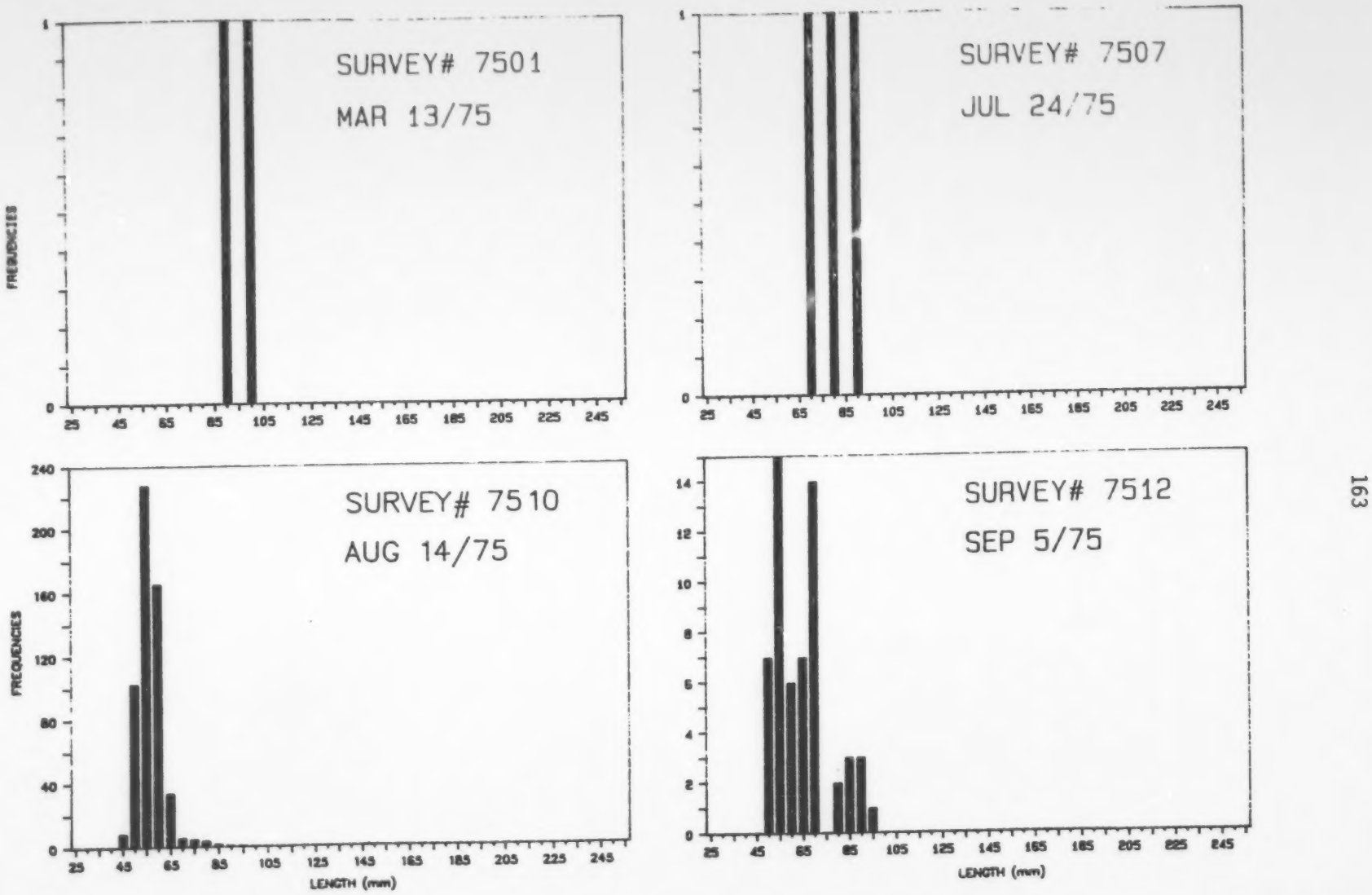


Fig. 27a. Sockeye (O. nerka) length frequencies in Harrison Lake.

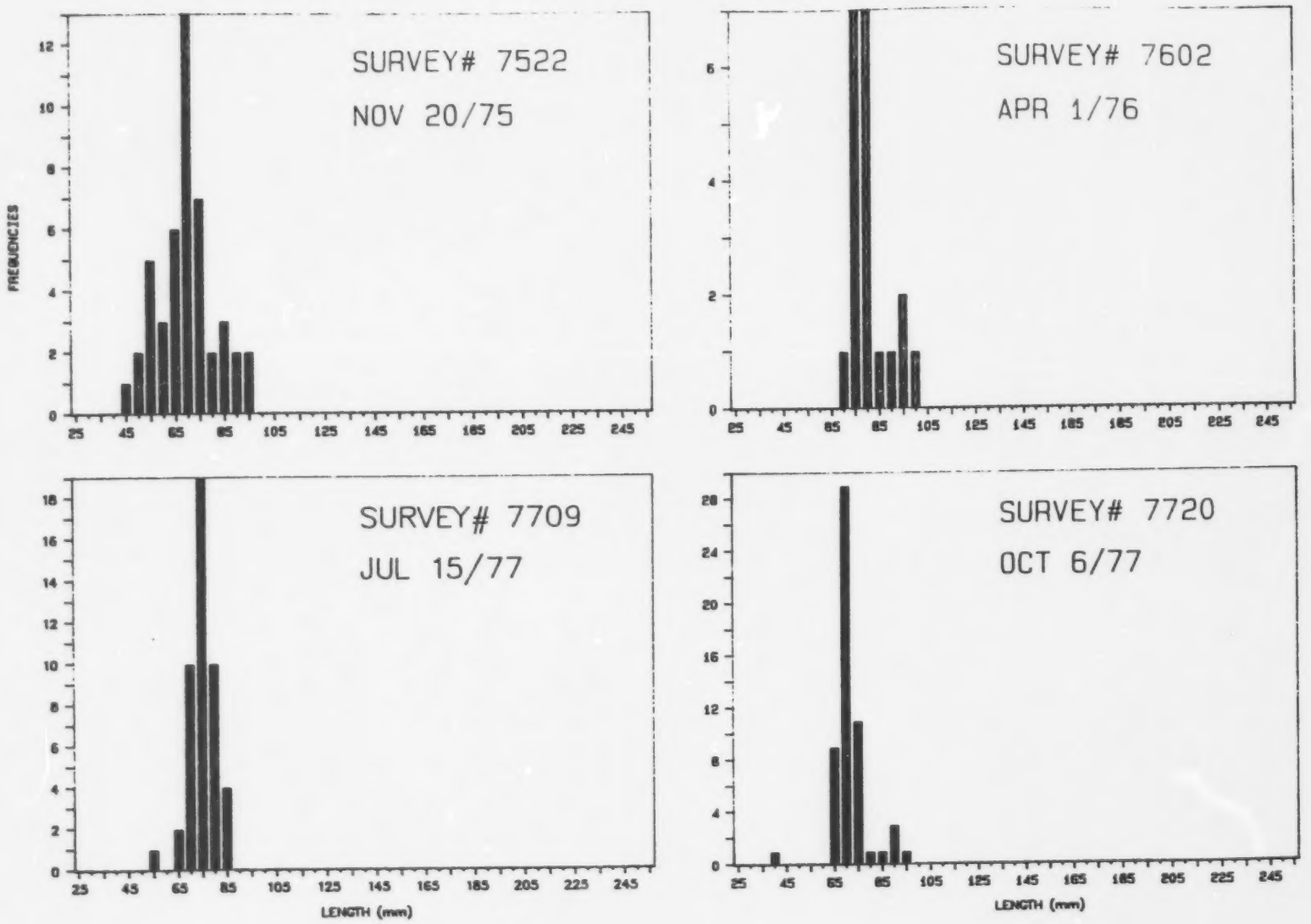


Fig. 27a. Continued.

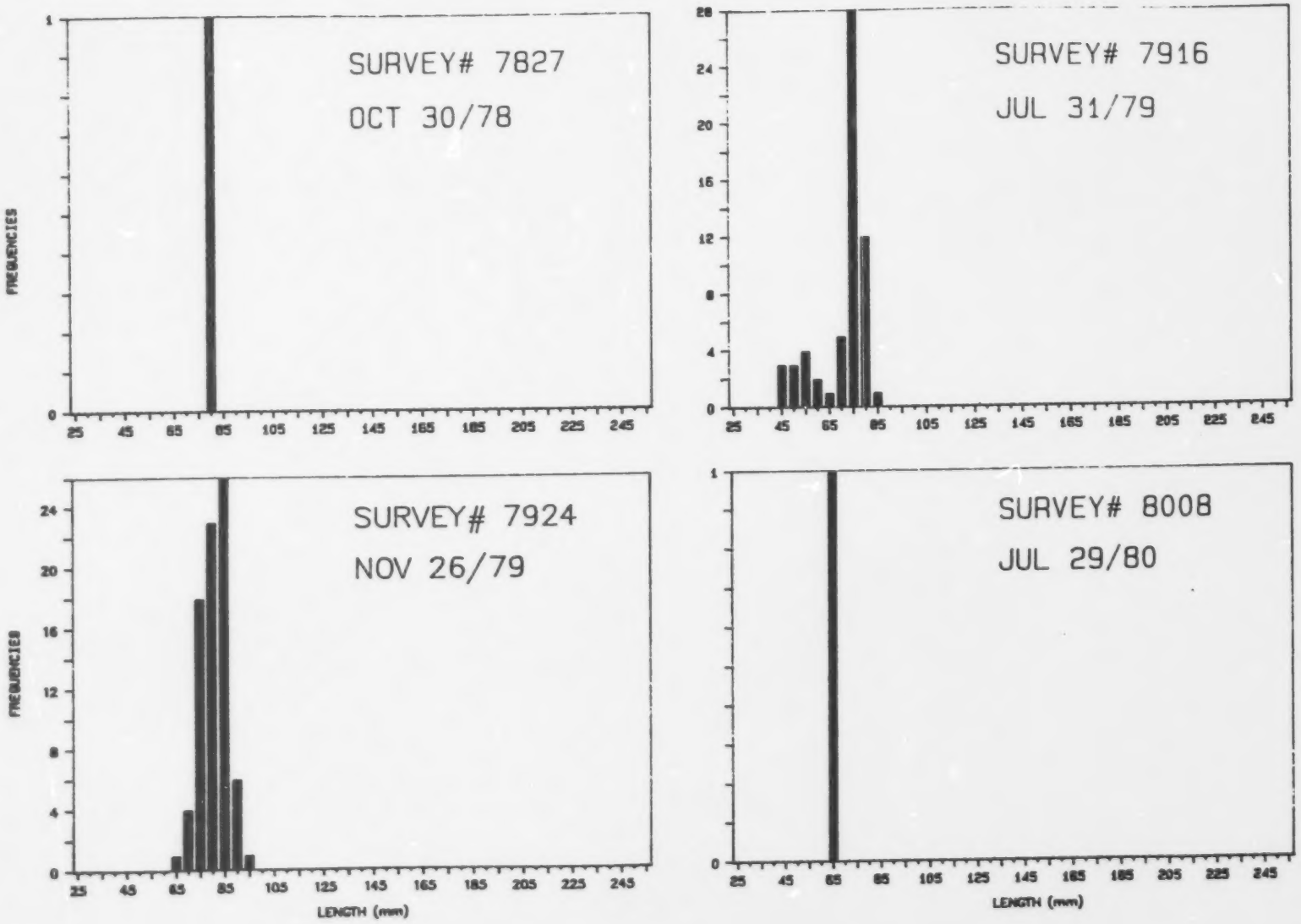


Fig. 27a. Continued.

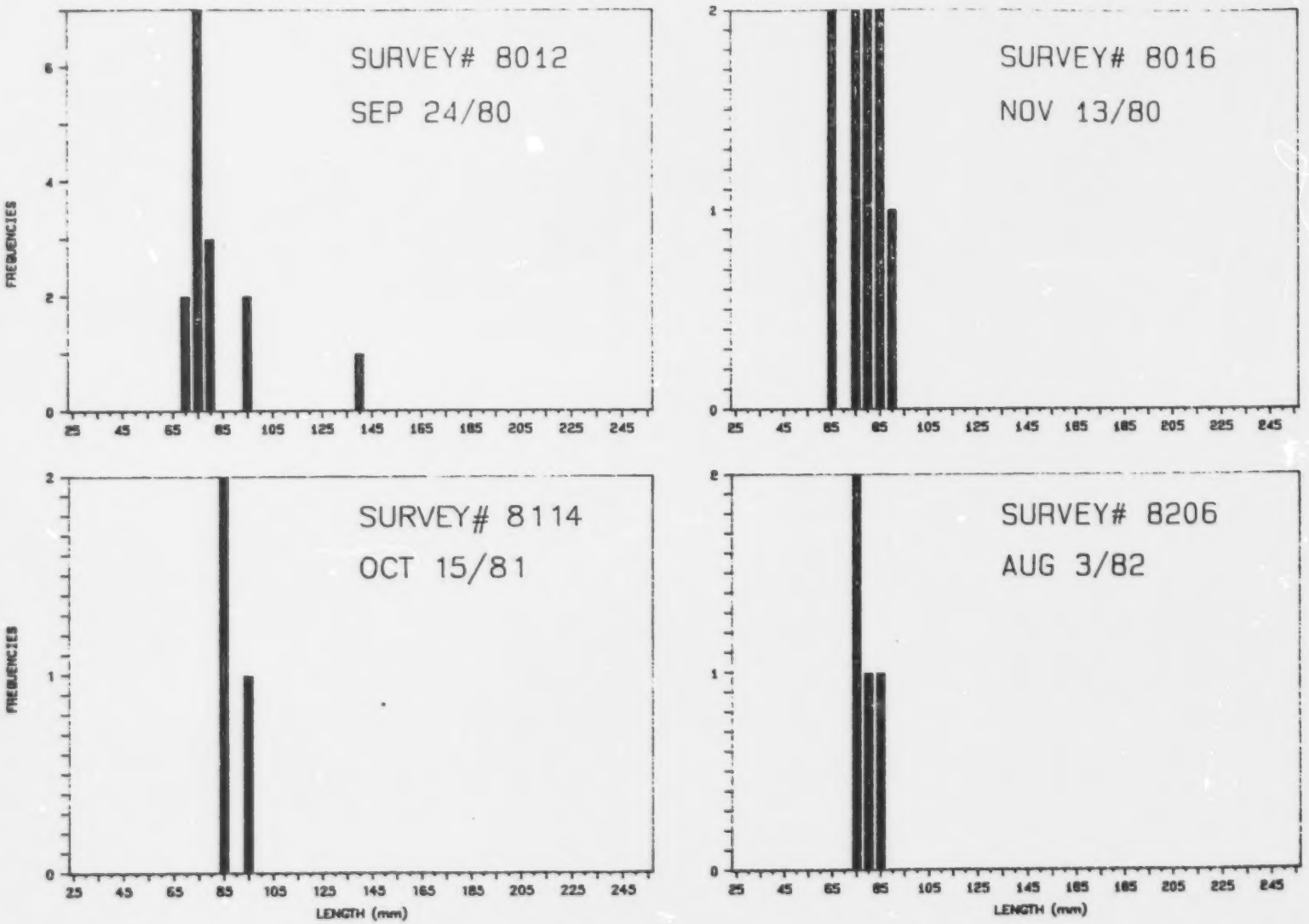
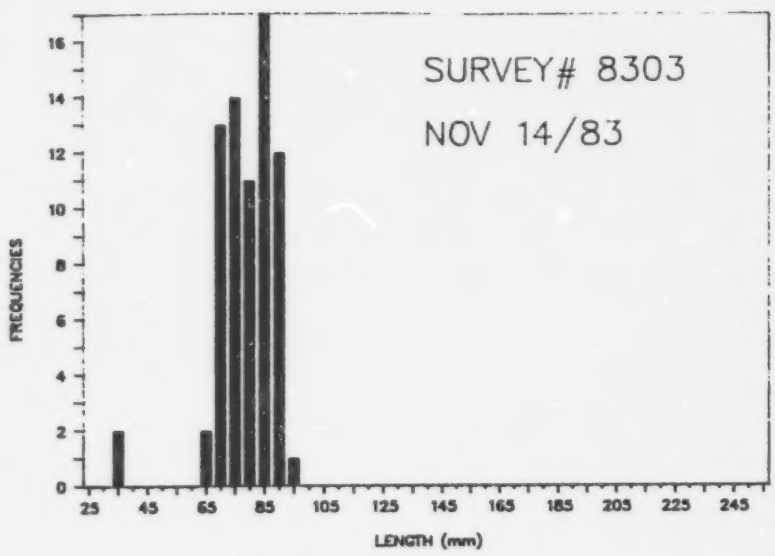


Fig. 27a. Continued.



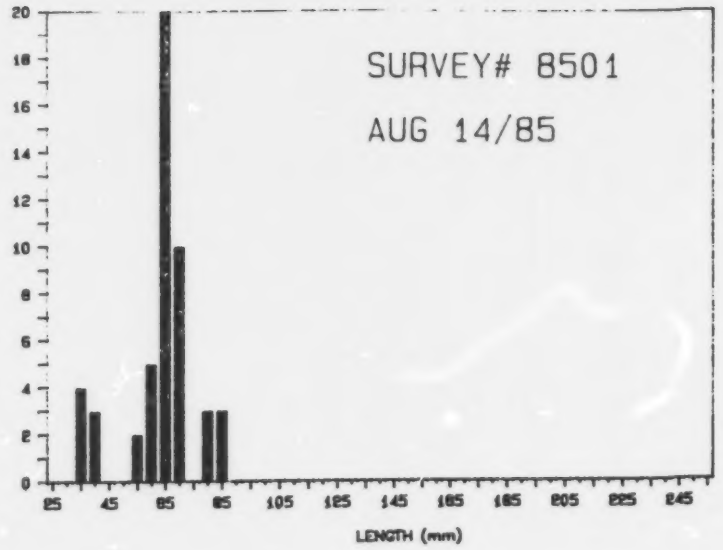


Fig. 27a. Continued.

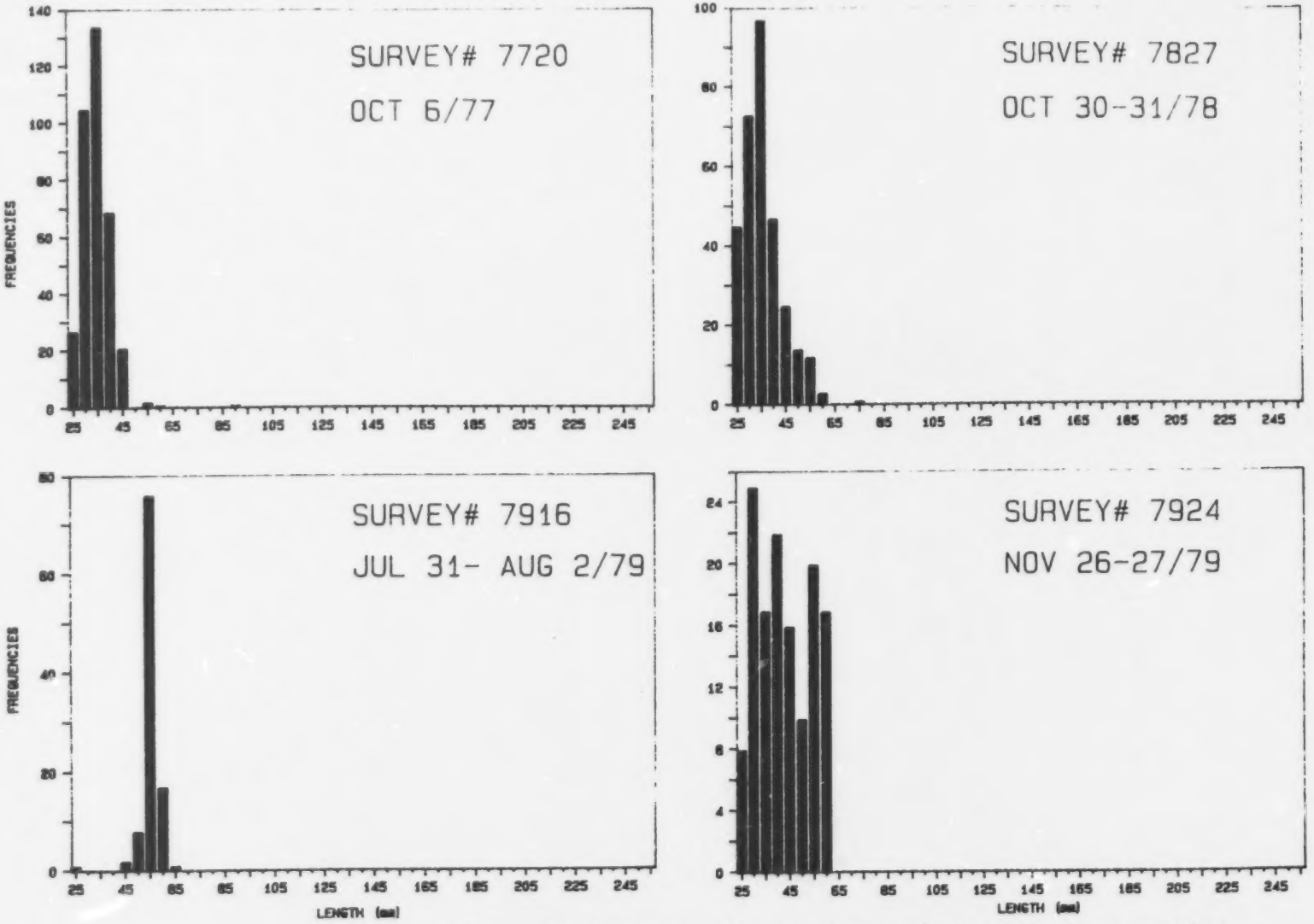


Fig. 27b. Stickleback (G. aculeatus) length frequencies in Harrison Lake.

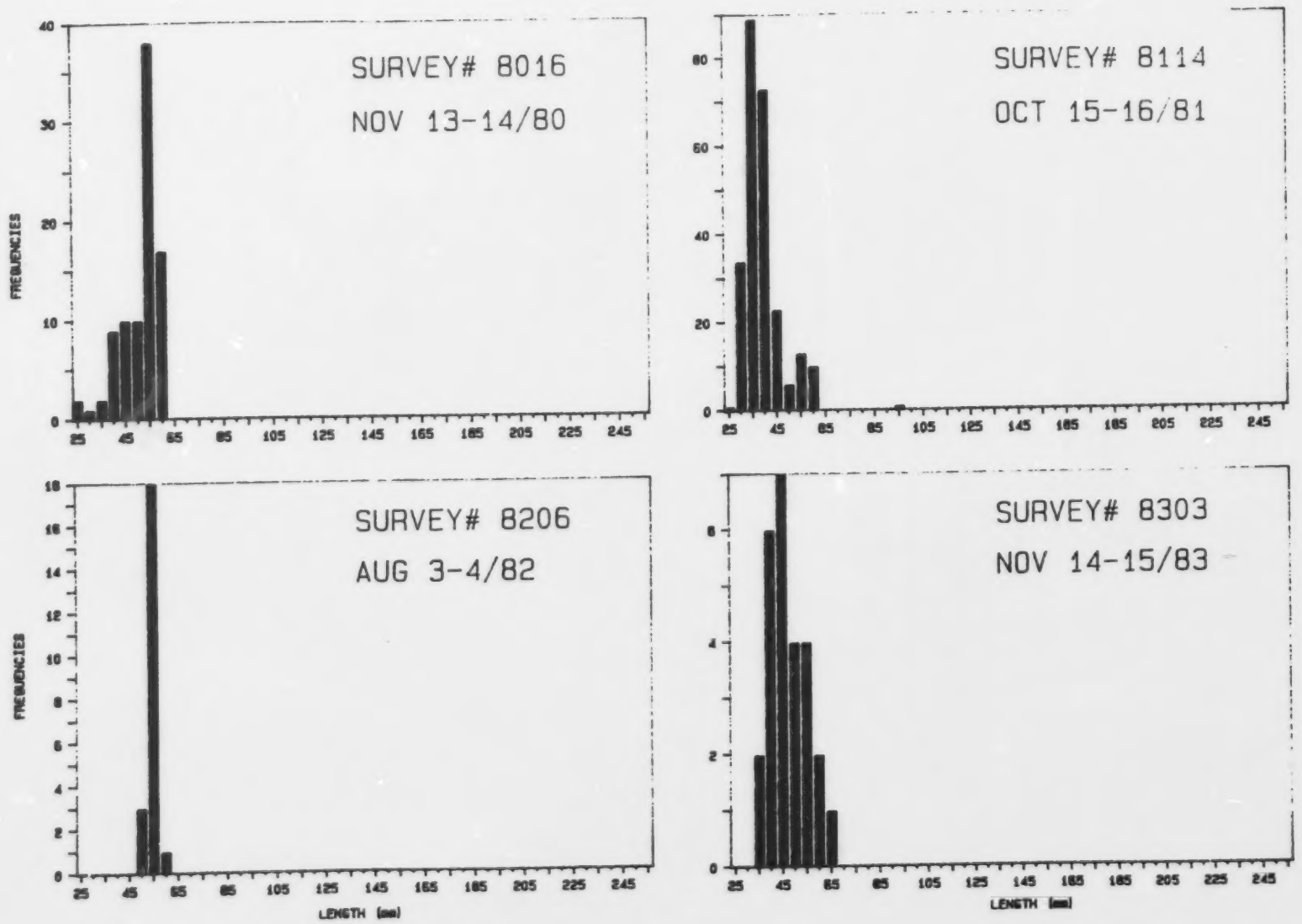


Fig. 27b. Continued.

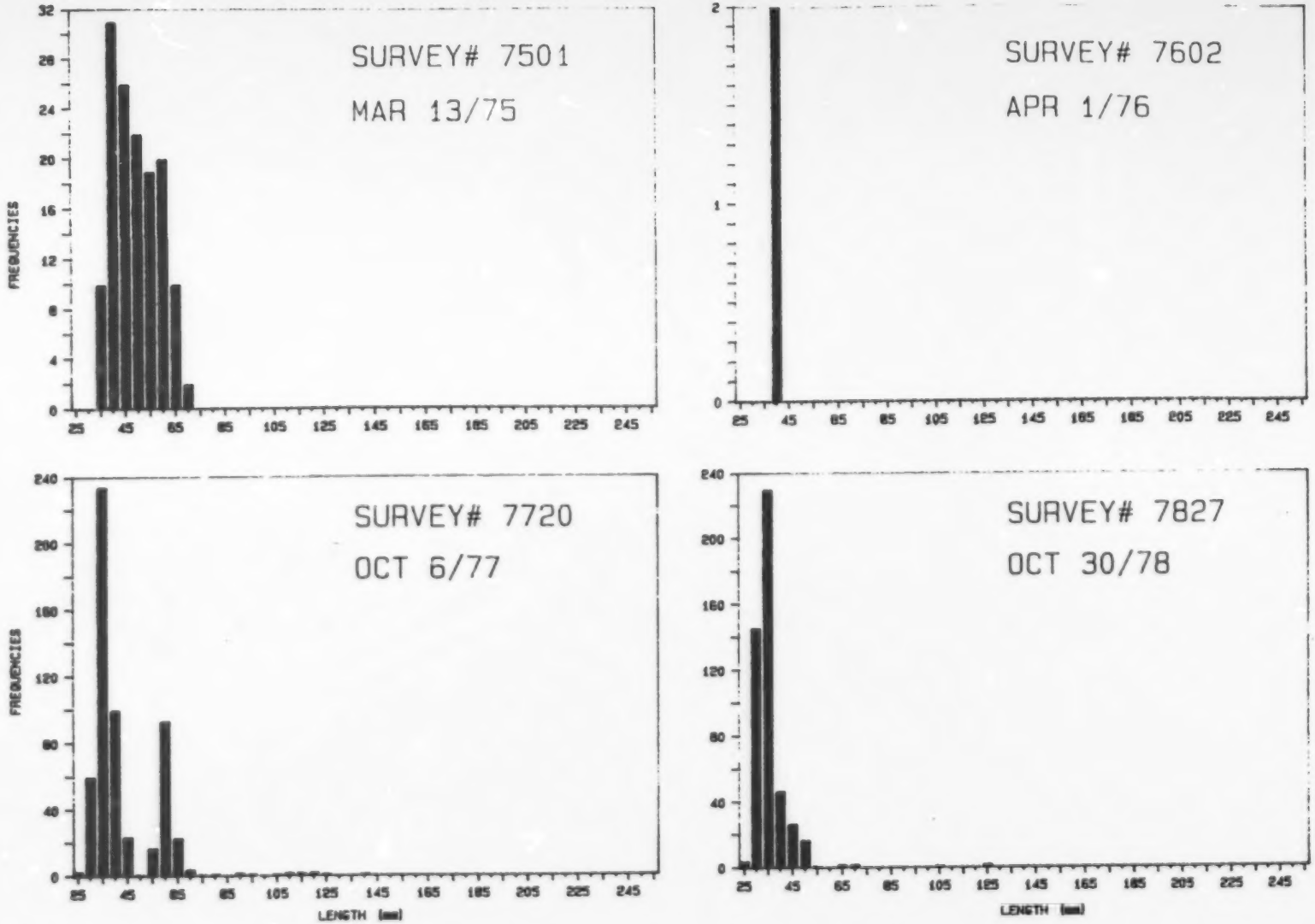


Fig. 27c. Smelt (S. thaleichthys) length frequencies in Harrison Lake.

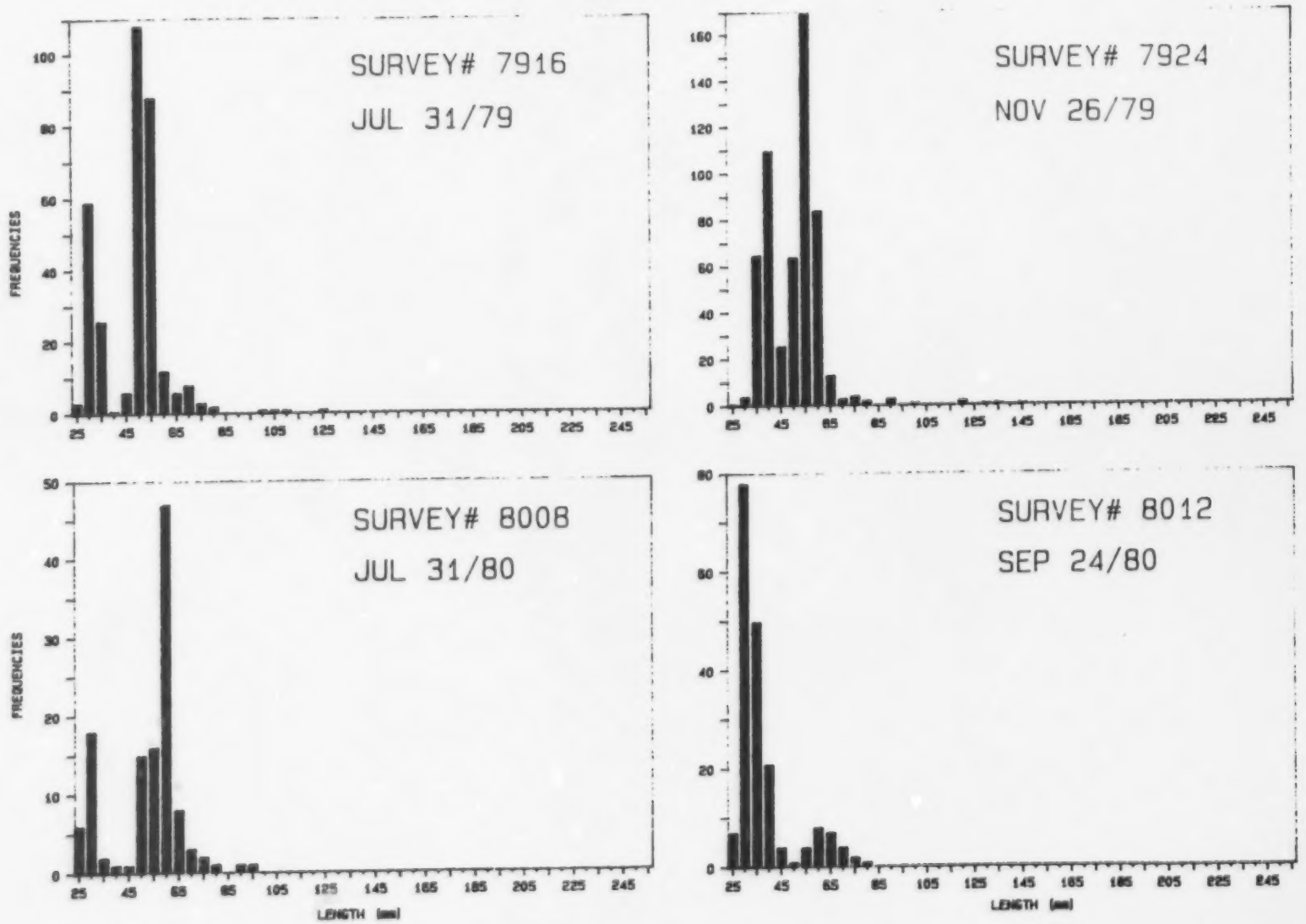


Fig. 27c. Smelt (S. thaleichthys) length frequencies in Harrison Lake.

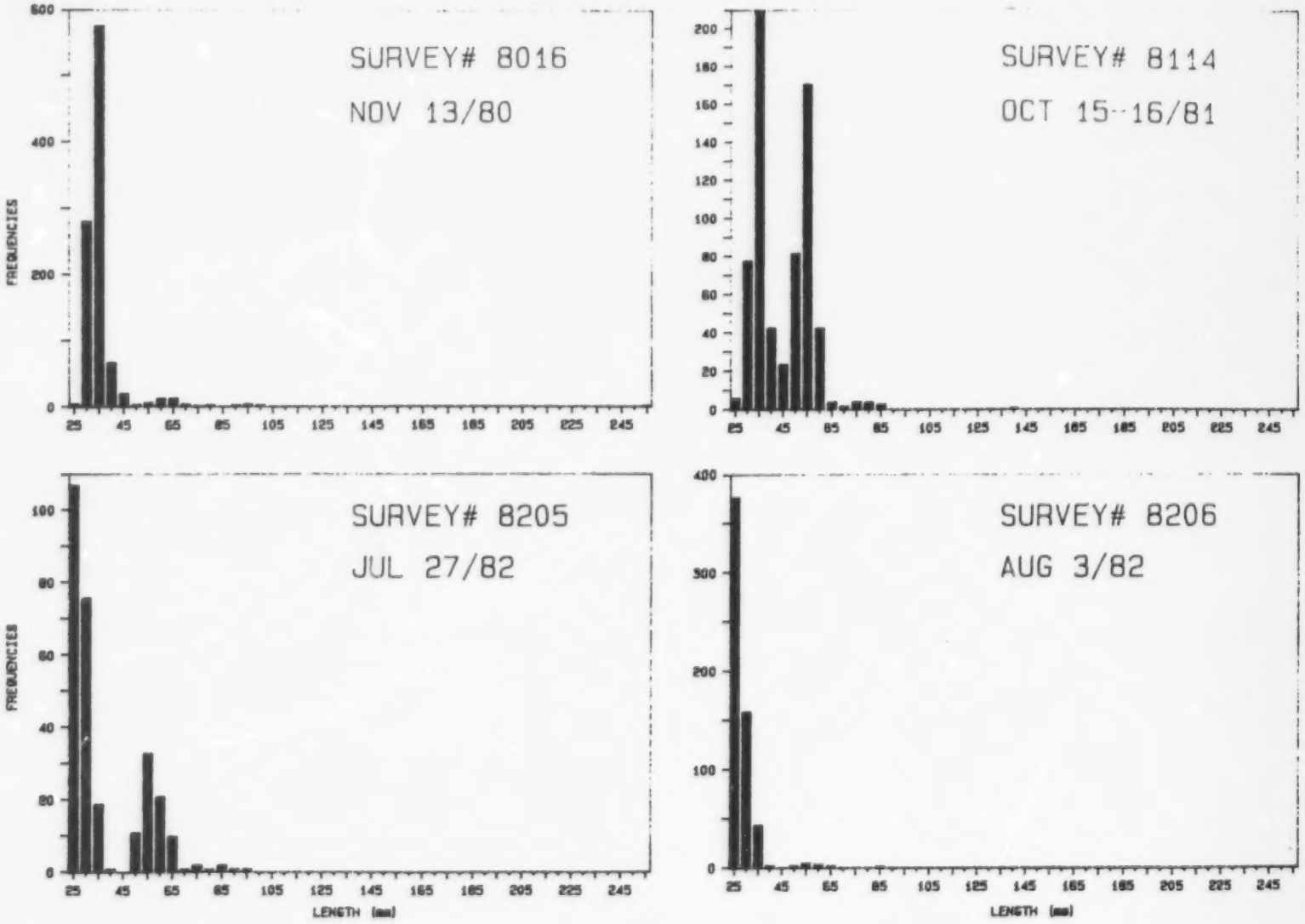


Fig. 27c. Continued.

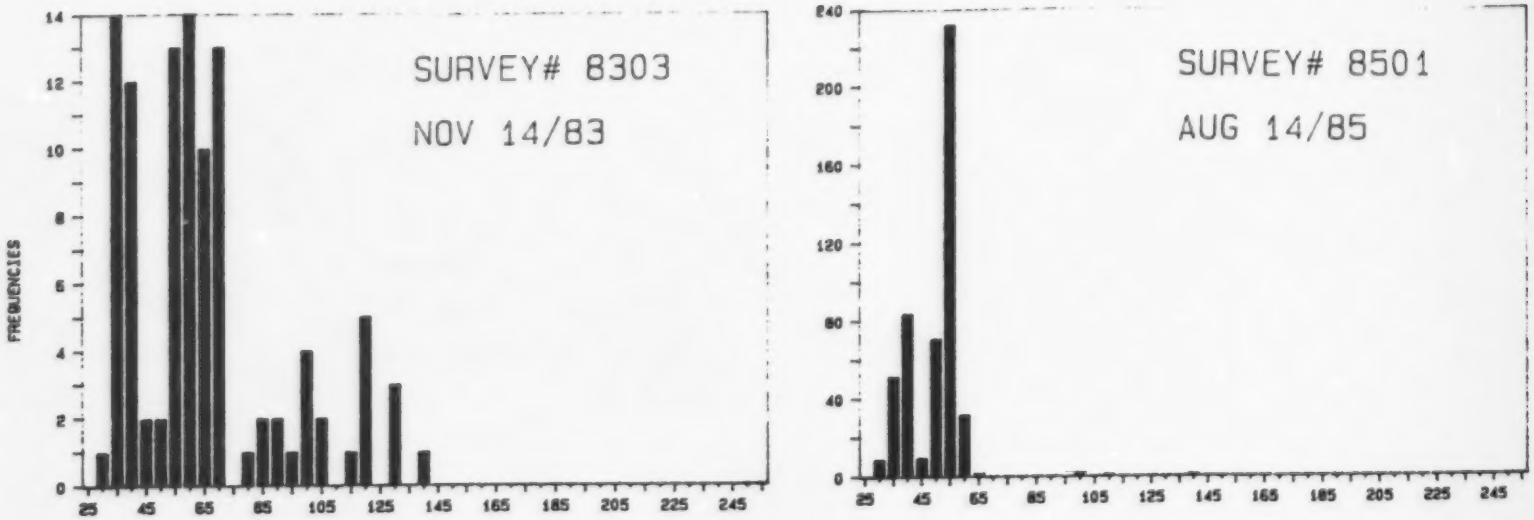


Fig. 27c. Continued.

Fig. 28. Map of Cultus Lake showing areas and transects.

Table 15a - Tow summary for Cultus Lake

SURVEY #	SAMPLE DATE	TOW	AREA	SAMPLE TIME	DURATION (min)	DEPTH (m)	SKY CODE	LIGHT CODE	WIND DIR	SURFACE TEMP (C)	CATCH
7503	APR 2/75	750006	2			36					1 AGE 0
											2 AGE 1
	APR 2/75	750007	2			25					2 AGE 1
											3 AGE 2+
	APR 2/75	750008	2			15					8 AGE 0
											2 AGE 1
	APR 2/75	750009	2			25					4 AGE 1
											2 AGE 2+
	APR 2/75	750010	2			15					5 AGE 0
											2 AGE 1
7504	JUN 26/75	750011	1								50 AGE 0
7509	AUG 6/75	750027	2			25					36 AGE 0
	AUG 7/75	750028	1			18					41 AGE 0
7511	SEP 4/75	750033	1			30					99 AGE 0
	SEP 4/75	750034	1								83 AGE 0
	SEP 4/75	750035				18					30 AGE 0
7521	NOV 12/75	750058				30					56 AGE 0
7601	MAR 24/76	760001			10	10					12 AGE 1
	MAR 24/76	760002			20	20					222 AGE 1
											1 AGE 2+
	MAR 24/76	760003			20	30					186 AGE 1
7604	JUN 8/76	760010			20	17					116 AGE 0
											1 AGE 1
7606	JUL 6/76	760013			20	18					233 AGE 0
	JUL 6/76	760014			20	22					177 AGE 0
7607	AUG 4/76	760015			10	18					59 AGE 0
	AUG 4/76	760016	1		10	25					441 AGE 0
7616	SEP 16/76	760042			15	25					177 AGE 0
7620	OCT 6/76	760048			10	35					69 AGE 0
7623	NOV 8/76	760056			10	35					74 AGE 0
	NOV 8/76	760057				30					134 AGE 0
7701	FEB 16/77	770001	2		15	30					30 AGE 1
	FEB 16/77	770002	2		15	15					10 AGE 1
	FEB 16/77	770003	2		15	30					252 AGE 1
											1 AGE 2+
	FEB 16/77	770004	2		15	15					11 AGE 1

Table 15a - Tow summary for Cultus Lake

SURVEY #	SAMPLE DATE	TOW	AREA	SAMPLE TIME	DURATION (min)	DEPTH (m)	SKY CODE	LIGHT CODE	WIND DIR	SURFACE TEMP (C)	CATCH
7703	APR 20/77	770010			15	27					44 AGE 1
	APR 20/77	770011			15	16					11 AGE 1
7704	APR 27/77	770012	1	20:50		15					6 AGE 0
											10 AGE 1
	APR 27/77	770013	2	21:11	10	15					1 AGE 0
											5 AGE 1
	APR 29/77	770014		21:00	15	10					4 AGE 1
7706	MAY 3/77	770015	1	14:00	20	40					71 AGE 0
7707	MAY 9/77	770016	1		10	12					132 AGE 0
											4 AGE 1
7708	JUN 22/77	770017			10	25					118 AGE 0
											4 AGE 1
	JUN 22/77	770018			12	15					154 AGE 0
7711	AUG 15/77	770027			10	28					171 AGE 0
											2 AGE 1
	AUG 15/77	770028			10	30					61 AGE 0
											2 AGE 1
7718	SEP 28/77	770045			10	30					120 AGE 0
											1 AGE 1
											5 SCULPIN
	SEP 29/77	770046		20:15	10	35					30 AGE 0
											3 SCULPIN
7801	FEB 6/78	780001	2	17:40	10	35		3	2	0	4.0	101 AGE 1
												2 AGE 2+
												7 SCULPIN
												21 STICKLEBACK
	FEB 6/78	780002	2	19:30	10	35		3	3	0	4.0	234 AGE 1
												1 AGE 2+
												17 SCULPIN
												20 STICKLEBACK
	FEB 6/78	780003	1	21:07	10	25		3	3	0	4.0	21 AGE 1
												5 STICKLEBACK
7802	APR 3/78	780004	1	21:36	5	20		4	3	0	8.0	32 AGE 1
												1 STICKLEBACK
	APR 4/78	780005	2	00:10	10	20		4	3	8	7.0	13 AGE 1
												1 SCULPIN
												2 STICKLEBACK

Table 15a - Tow summary for Cultus Lake

SURVEY #	SAMPLE DATE	TOW	AREA	SAMPLE TIME	DURATION (min)	DEPTH (m)	SKY CODE	LIGHT CODE	WIND DIR	SURFACE TEMP (C)	CATCH
7806	JUN 5/78	780023	1	22:25	20	14	1	3	0	18.0	18 AGE 0 1 AGE 1 1 CYPRINID 4 SCULPIN 2 STICKLEBACK
	JUN 6/78	780024	2	00:12	20	12	1	3	0	19.0	20 AGE 0 1 AGE 1 3 SCULPIN
7812	AUG 2/78	780059	1	22:04	10	18	1	3	3	22.0	17 AGE 0 4 CYPRINID 3 SCULPIN
	AUG 2/78	780060	2	23:38	10	17	1	3	3	22.0	16 AGE 0 1 CYPRINID 2 SCULPIN
7914	JUL 25/79	790061	1	21:55	5	22	1	3	0	21.0	230 AGE 0 1 CYPRINID 11 SCULPIN 4 STICKLEBACK
	JUL 25/79	790062	1	22:35	5	15	1	3	0	21.5	129 AGE 0 3 CYPRINID 5 SCULPIN
	JUL 26/79	790063	2	00:15	5	22	1	3	0	21.5	245 AGE 0 1 CYPRINID 9 SCULPIN 1 STICKLEBACK
7922	NOV 15/79	790117	1	20:35	5	30	3	3	8	9.5	150 AGE 0 1 SCULPIN
	NOV 15/79	790118	2	22:07	5	30	3	3	4	9.5	55 AGE 0 3 SCULPIN
8001	FEB 6/80	800001	2	20:49	5	22	4	3	0	2.5	67 AGE 1 1 AGE 2+ 7 STICKLEBACK
	FEB 6/80	800002	1	22:00	5	30	4	3	0	2.5	54 AGE 1 3 SCULPIN 7 STICKLEBACK
	FEB 6/80	800003	1	22:30	5	15	4	3	0	2.5	26 AGE 1 24 STICKLEBACK
8004	MAR 5/80	800010	2	20:30	10	15	1	3	8	2.5	77 AGE 1 2 SCULPIN 6 STICKLEBACK

Table 15a - Tow summary for Cultus Lake

SURVEY #	SAMPLE DATE	TOW	AREA	SAMPLE TIME	DURATION (min)	DEPTH (m)	SKY CODE	LIGHT CODE	WIND DIR	SURFACE TEMP (C)	CATCH
8007	JUL 24/80	800028	1	22:10	2	30	1	5	0	19.5	78 AGE 0
											2 AGE 1
											1 SCULPIN
	JUL 25/80	800029	2	23:41	5	15	1	5	0	20.5	101 AGE 0
											1 OTHER
8015	OCT 30/80	800066	2	19:50	10	22	1	3	0	12.5	54 AGE 0
											5 SCULPIN
											4 STICKLEBACK
	OCT 30/80	800067	2	20:30	5	30	1	3	0	12.5	72 AGE 0
											1 AGE 1
											11 SCULPIN
											1 STICKLEBACK
	OCT 30/80	800068	1	22:37	3	30	1	3	0	12.5	139 AGE 0
											1 AGE 1
											1 OTHER
											4 SCULPIN
											6 STICKLEBACK
8101	MAR 24/81	810001	1	22:25	10	22	2	3	0	7.0	92 AGE 1
											9 AGE 2+
											1 SCULPIN
	MAR 25/81	810002	2	01:00	1	30	1	4	0	14.0	108 AGE 1
8102	MAY 12/81	810003	2	22:10	20	30	1	4	0	13.0	5 AGE 1
											12 SCULPIN
											3 STICKLEBACK
	MAY 13/81	810004	1	01:00	10	7	1	4	0	15.0	24 AGE 0
											1 AGE 1
8103	JUN 9/81	810005	2	23:57	10	22	3	3	4	14.5	11 AGE 0
											5 AGE 1
											2 AGE 2+
	JUN 10/81	810006	1	02:10	15	15	3	3	4	11.5	10 AGE 0
											7 AGE 1
											6 SCULPIN
8106	AUG 13/81	810014	1	20:46	5	31	1	4	0	22.5	4 AGE 0
											3 AGE 1
											5 SCULPIN
	AUG 14/81	810015	2	01:30	10	19	1	4	0	23.5	1 AGE 0
											1 AGE 1

Table 15a - Tow summary for Cultus Lake

SURVEY #	SAMPLE DATE	TOW	AREA	SAMPLE TIME	DURATION (min)	DEPTH (m)	SKY CODE	LIGHT CODE	WIND DIR	SURFACE TEMP (C)	CATCH
8111	SEP 8/81	810032	2	21:30	5	31	1	4	0	21.0	15 AGE 0 10 AGE 1 1 CYPRINID 3 SCULPIN
	SEP 9/81	810033	1	01:20	5	31	1	4	0	19.5	1 AGE 0 3 AGE 1 1 CYPRINID 2 SCULPIN
8115	NOV 26/81	810043	1	21:11	10	25	1	3	7	8.5	9 AGE 0 2 AGE 1 1 SCULPIN 28 STICKLEBACK
	NOV 27/81	810044	2	00:30	8	31	1	3	7	8.5	10 AGE 0 12 AGE 1 32 SCULPIN 26 STICKLEBACK
8202	JUL 5/82	820005	1	21:55	1	7	2	3	0	17.5	17 SCULPIN
	JUL 6/82	820006	2	23:20	10	13	2	3	0	17.5	55 AGE 0 1 CYPRINID 6 SCULPIN
8301	JUL 11/83	830001	1	22:49	3	13				16.0	121 AGE 0 1 SCULPIN
	JUL 11/83	830002	1	23:12	5	25				16.0	66 AGE 0 1 CYPRINID 9 SCULPIN
	JUL 12/83	830003	2	02:08	2	25				18.0	209 AGE 0 1 AGE 1 1 CYPRINID 5 SCULPIN
8401	FEB 22/84	840001	2	18:45	5	7	6	3	0	4.0	76 AGE 1 3 STICKLEBACK
	FEB 22/84	840002	2	19:00	5	25	6	3	0	4.0	52 AGE 1 1 SCULPIN 4 STICKLEBACK
	FEB 22/84	840003	2	19:25	3	31	6	3	0	4.0	63 AGE 1
	FEB 22/84	840004	1	19:45	3	31	6	3	0	4.0	43 AGE 1 1 AGE 2+
	FEB 22/84	840005	1	20:06	4	13	6	3	0	4.0	86 AGE 1 1 AGE 2+ 1 STICKLEBACK
	FEB 22/84	840006	1	20:30	3	19	6	3	0		115 AGE 1 1 CYPRINID 4 STICKLEBACK

Table 15b - Trawl statistics by survey for Cultus Lake

SURVEY#	DATES	CATCH		LENGTH (mm)					WEIGHT (g)				
		SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
7503	APR 2/75	AGE 0	14	25.36	26	24	0.61	0.37	0.11	0.16	0.06	0.02	0.00
		AGE 1	12	83.75	99	71	7.74	59.85	6.64	12.17	3.60	2.18	4.75
		AGE 2+	5	109.20	120	100	8.52	72.56	15.07	19.10	11.88	3.22	10.38
7504	JUN 26/75	AGE 0	50	34.28	49	23	5.25	27.56	0.53	1.59	0.11	0.28	0.08
7509	AUG 6-7/75	AGE 0	77	50.52	71	35	8.79	77.26	1.77	4.80	0.50	0.97	0.94
7511	SEP 4/75	AGE 0	212	56.70	82	39	8.33	69.31	2.15	6.88	0.60	1.00	1.00
7521	NOV 12/75	AGE 0	56	64.43	79	38	9.02	81.39	2.79	5.10	0.55	1.00	1.01
7601	MAR 24/76	AGE 1	420	73.30	91	45	7.63	58.15	3.65	7.33	0.94	1.11	1.24
		AGE 2+	1	123.00	123	123	0.00	0.00	15.00	15.00	15.00	0.00	0.00
7604	JUN 8/76	AGE 0	116	32.16	40	26	2.32	5.40	0.34	0.65	0.15	0.08	0.00
		AGE 1	1	68.00	68	68	0.00	0.00	3.65	3.65	3.65	0.00	0.00
7606	JUL 6/76	AGE 0	410	42.20	55	30	4.58	21.00	0.82	2.18	0.21	0.30	0.09
7607	AUG 4/76	AGE 0	500	57.10	70	41	5.52	30.47	2.08	6.25	0.69	0.64	0.41
7616	SEP 16/76	AGE 0	177	60.85	80	37	7.22	52.08	2.52	5.68	0.49	0.89	0.79
7620	OCT 6/76	AGE 0	69	63.59	85	45	7.97	63.46	3.04	7.51	1.06	1.18	1.39
7623	NOV 8/76	AGE 0	208	71.35	94	40	8.19	67.11	3.98	8.80	0.62	1.33	1.78
7701	FEB 16/77	AGE 1	303	80.76	112	50	7.53	56.71	5.58	15.76	1.11	1.67	2.78
		AGE 2+	1	83.00	83	83	0.00	0.00	5.76	5.76	5.76	0.00	0.00
7703	APR 20/77	AGE 1	65	78.25	96	59	9.71	94.31	5.34	9.27	2.20	1.97	3.87
7704	APR 27-29/77	AGE 0	7	29.00	30	28	0.76	0.57	0.19	0.23	0.15	0.02	0.00
		AGE 1	19	76.58	101	59	11.61	134.77	5.47	11.76	1.96	2.71	7.36

Table 15b - Trawl statistics by survey for Cultus Lake

SURVEY#	DATES	CATCH		LENGTH (mm)					WEIGHT (g)				
		SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
7706	MAY 3/77	AGE 0	71	28.15	32	26	1.25	1.57	0.18	0.30	0.11	0.04	0.00
7707	MAY 9/77	AGE 0	132	28.67	34	26	1.57	2.46	0.19	0.34	0.11	0.05	0.00
		AGE 1	4	69.75	83	53	11.43	130.69	4.08	6.49	1.70	1.78	3.17
7708	JUN 22/77	AGE 0	272	39.86	50	25	4.03	16.22	0.72	1.55	0.10	0.23	0.05
		AGE 1	4	106.00	110	103	2.74	7.50	13.57	14.30	12.91	0.61	0.37
7711	AUG 15/77	AGE 0	232	63.57	78	34	7.42	55.06	2.99	5.50	0.49	1.02	1.03
		AGE 1	4	117.75	131	101	12.68	160.69	20.51	29.49	12.02	8.41	70.69
7718	SEP 28-29/77	AGE 0	150	67.62	83	43	8.47	71.76	3.59	7.92	0.84	1.33	1.77
		AGE 1	1	105.00	105	105	0.00	0.00	12.90	12.90	12.90	0.00	0.00
		SCULPIN	8	33.50	37	23	4.66	21.75	0.53	0.80	0.12	0.22	0.05
7801	FEB 6/78	AGE 1	356	75.08	90	48	7.08	50.12	3.85	6.66	1.02	1.02	1.03
		AGE 2+	3	118.00	121	115	2.45	6.00	14.21	16.75	11.87	2.00	3.99
		SCULPIN	24	40.63	105	30	13.93	194.15	1.41	20.36	0.30	3.96	15.66
		STICKLEBACK	46	43.54	56	24	6.26	39.16	0.81	1.73	0.09	0.34	0.12
7802	APR 3-4/78	AGE 1	45	74.27	89	53	8.11	65.80	3.97	6.46	1.32	1.15	1.33
		SCULPIN	1	17.00	17	17	0.00	0.00	0.09	0.09	0.09	0.00	0.00
		STICKLEBACK	3	43.67	49	38	4.50	20.22	0.79	1.03	0.56	0.19	0.04
7806	JUN 5-6/78	AGE 0	38	29.97	36	23	3.03	9.18	0.27	0.47	0.11	0.10	0.00
		AGE 1	2	78.50	79	78	0.50	0.25	5.20	5.31	5.08	0.12	0.01
		CYPRINID	1	34.00	34	34	0.00	0.00	0.48	0.48	0.48	0.00	0.00
		SCULPIN	7	21.43	38	13	8.75	76.53	0.18	0.64	0.02	0.21	0.04
		STICKLEBACK	2	45.00	49	41	4.00	16.00	0.93	1.20	0.66	0.27	0.07
7812	AUG 2/78	AGE 0	33	49.79	59	40	4.64	21.56	1.47	2.40	0.77	0.41	0.17
		CYPRINID	5	21.80	44	16	11.11	123.36	0.30	1.19	0.06	0.45	0.20
		SCULPIN	5	27.40	39	17	8.01	64.24	0.41	0.90	0.09	0.28	0.08

Table 15b - Trawl statistics by survey for Cultus Lake

SURVEY#	DATES	CATCH		LENGTH (mm)					WEIGHT (g)				
		SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
7914	JUL 25-26/79	AGE 0	604	49.11	74	20	9.24	85.29	1.54	4.60	0.04	0.79	0.63
		CYPRINID	5	46.80	66	16	16.62	276.16	2.15	5.03	0.10	1.60	2.57
		SCULPIN	25	21.84	34	10	7.05	49.73	0.17	0.56	1.E-2	0.13	0.02
		STICKLEBACK	5	40.20	49	35	4.79	22.96	0.75	1.42	0.39	0.35	0.13
7922	NOV 15/79	AGE 0	205	63.46	94	33	10.87	118.24	2.88	8.27	0.38	1.40	1.95
		SCULPIN	4	25.75	33	20	4.87	23.69	0.22	0.48	0.08	0.16	0.03
8001	FEB 6/80	AGE 1	147	74.04	95	47	9.44	89.07	4.03	8.44	1.08	1.47	2.15
		AGE 2+	1	170.00	170	170	0.00	0.00	62.45	62.45	62.45	0.00	0.00
		SCULPIN	3	85.33	132	36	39.24	1539.78	11.86	27.77	0.57	11.57	133.98
		STICKLEBACK	38	42.42	54	23	6.17	38.03	0.79	1.38	0.11	0.29	0.08
8004	MAR 5/80	AGE 1	77	71.96	95	41	10.85	117.75	3.51	7.46	0.70	1.42	2.02
		SCULPIN	2	38.50	39	38	0.50	0.25	0.81	0.87	0.75	0.06	0.00
		STICKLEBACK	6	42.17	49	39	3.34	11.14	0.81	1.20	0.59	0.20	0.04
8007	JUL 24-25/80	AGE 0	179	40.46	63	25	9.00	81.03	0.91	2.80	0.14	0.62	0.39
		AGE 1	2	97.00	98	96	1.00	1.00	12.35	12.94	11.77	0.58	0.34
		OTHER	1	64.00	64	64	0.00	0.00	4.42	4.42	4.42	0.00	0.00
		SCULPIN	1	35.00	35	35	0.00	0.00	0.55	0.55	0.55	0.00	0.00
8015	OCT 30/80	AGE 0	265	59.63	85	34	9.78	95.61	2.29	8.70	0.32	1.17	1.36
		AGE 1	2	139.00	146	132	7.00	49.00	30.06	35.05	25.07	4.99	24.90
		OTHER	1	28.00	28	28	0.00	0.00	0.19	0.19	0.19	0.00	0.00
		SCULPIN	20	35.30	68	13	16.03	257.01	0.81	2.98	0.02	0.93	0.86
		STICKLEBACK	11	40.45	46	37	2.87	8.25	0.71	0.96	0.43	0.17	0.03
8101	MAR 24-25/81	AGE 1	200	64.72	105	43	10.39	108.01	2.97	11.32	0.71	1.50	2.26
		AGE 2+	9	133.67	148	120	8.19	67.11	24.75	34.85	16.26	5.86	34.30
		SCULPIN	1	37.00	37	37	0.00	0.00	0.60	0.60	0.60	0.00	0.00

Table 15b - Trawl statistics by survey for Cultus Lake

SURVEY#	DATES	CATCH		LENGTH (mm)					WEIGHT (g)				
		SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
8102	MAY 12-13/81	AGE 0	24	25.92	30	23	1.66	2.74	0.18	0.32	0.11	0.05	0.00
		AGE 1	6	61.83	77	55	7.06	49.81	2.81	5.41	1.83	1.18	1.40
		SCULPIN	12	35.92	44	21	6.68	44.58	0.58	0.93	0.06	0.28	0.08
		STICKLEBACK	3	53.33	58	50	3.40	11.56	1.62	2.06	1.29	0.32	0.11
8103	JUN 9-10/81	AGE 0	21	31.52	37	26	2.87	8.25	0.33	0.55	0.15	0.10	0.00
		AGE 1	12	69.83	82	59	7.02	49.31	3.88	5.68	2.46	1.06	1.13
		AGE 2+	2	159.00	160	158	1.00	1.00	54.91	56.86	52.96	1.95	3.80
		SCULPIN	6	35.17	43	29	5.30	28.14	0.53	0.89	0.26	0.24	0.06
8106	AUG 13-14/81	AGE 0	5	46.60	56	37	7.34	53.84	1.28	2.01	0.55	0.58	0.34
		AGE 1	4	99.50	118	87	11.41	130.25	12.87	19.94	9.63	4.22	17.82
		SCULPIN	5	35.40	42	28	5.35	28.64	0.48	0.78	0.23	0.22	0.05
8111	SEP 8-9/81	AGE 0	16	54.94	63	44	5.39	29.06	1.86	3.00	0.91	0.55	0.31
		AGE 1	13	102.92	118	89	7.40	54.69	13.12	18.33	8.12	2.86	8.19
		CYPRINID	2	21.50	22	21	0.50	0.25	0.10	0.13	0.08	0.03	0.00
		SCULPIN	5	31.60	37	25	4.27	18.24	0.38	0.61	0.18	0.15	0.02
8115	NOV 26-27/81	AGE 0	19	68.68	82	49	7.55	57.06	3.69	6.04	1.52	1.09	1.20
		AGE 1	14	103.71	125	93	9.22	84.92	12.21	22.04	8.55	3.90	15.25
		SCULPIN	33	31.91	48	18	7.47	55.84	0.44	1.45	0.03	0.33	0.11
		STICKLEBACK	54	44.37	60	28	6.26	39.16	0.92	2.05	0.20	0.39	0.15
8202	JUL 5-6/82	AGE 0	55	46.84	57	28	4.88	23.85	1.32	2.29	0.34	0.37	0.13
		CYPRINID	1	43.00	43	43	0.00	0.00	1.32	1.32	1.32	0.00	0.00
		SCULPIN	23	18.22	47	10	11.45	131.13	0.20	1.27	0.01	0.37	0.13
8301	JUL 11-12/83	AGE 0	396	44.93	65	28	7.19	51.74	1.11	3.41	0.27	0.55	0.30
		AGE 1	1	71.00	71	71	0.00	0.00	4.11	4.11	4.11	0.00	0.00
		CYPRINID	2	54.50	60	49	5.50	30.25	2.38	3.07	1.70	0.68	0.47
		SCULPIN	15	33.00	41	27	4.16	17.33	0.48	0.78	0.29	0.15	0.02

Table 15b - Trawl statistics by survey for Cultus Lake

SURVEY#	DATES	CATCH		LENGTH (mm)					WEIGHT (g)				
		SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
8401	FEB 22/84	AGE 1	435	72.41	94	45	7.09	50.31	3.59	7.84	0.26	1.08	1.16
		AGE 2+	2	155.00	180	130	25.00	625.00	42.22	61.80	22.64	19.58	383.38
		CYPRINID	1	120.00	120	120	0.00	0.00	15.88	15.88	15.88	0.00	0.00
		SCULPIN	1	37.00	37	37	0.00	0.00	0.45	0.45	0.45	0.00	0.00
		STICKLEBACK	12	43.08	51	28	7.03	49.41	0.73	1.19	0.21	0.28	0.08

Table 15c - Trawl statistics by tow for Cultus Lake

TRAWL					CATCH		LENGTH (mm)					WEIGHT (g)				
AREA	DATE	TOW	DEPTH (m)	DURATION (min)	SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
SURVEY # 7503																
2	APR 2/75	750006	36		AGE 0	1	26.00	26	26	0.00	0.00	0.16	0.16	0.16	0.00	0.00
					AGE 1	2	86.00	86	86	0.00	0.00	7.30	7.49	7.11	0.19	0.04
2	APR 2/75	750007	25		AGE 1	2	84.50	87	82	2.50	6.25	6.93	7.54	6.32	0.61	0.37
					AGE 2+	3	107.67	119	100	8.18	66.89	14.49	16.89	11.88	3.13	9.78
2	APR 2/75	750008	15		AGE 0	8	25.63	26	25	0.48	0.23	0.11	0.13	0.06	0.02	0.00
					AGE 1	2	80.50	89	72	8.50	72.25	5.54	7.16	3.92	1.62	2.62
2	APR 2/75	750009	25		AGE 1	4	85.75	99	74	8.98	80.69	7.43	12.17	4.03	2.99	8.92
					AGE 2+	2	111.50	120	103	8.50	72.25	15.93	19.10	12.76	3.17	10.05
2	APR 2/75	750010	15		AGE 0	5	24.80	25	24	0.40	0.16	0.10	0.10	0.10	0.00	0.00
					AGE 1	2	80.00	89	71	9.00	81.00	5.20	6.80	3.60	1.60	2.56
SURVEY # 7504																
1	JUN 26/75	750011			AGE 0	50	34.28	49	23	5.25	27.56	0.53	1.59	0.11	0.28	0.08
SURVEY # 7509																
2	AUG 6/75	750027	25		AGE 0	36	48.14	71	35	7.97	63.51	1.58	4.80	0.60	0.80	0.65
1	AUG 7/75	750028	18		AGE 0	41	52.61	71	38	8.94	79.99	1.95	4.71	0.50	1.06	1.13
SURVEY # 7511																
1	SEP 4/75	750033	30		AGE 0	99	57.41	76	39	8.10	65.68	2.31	5.40	0.80	0.97	0.94
1	SEP 4/75	750034			AGE 0	83	58.19	82	43	7.43	55.22	2.19	6.88	0.85	0.94	0.89
	SEP 4/75	750035	18		AGE 0	30	50.23	76	41	8.41	70.65	1.51	5.30	0.60	1.00	1.00
SURVEY # 7521																
	NOV 12/75	750058	30		AGF 0	56	64.43	79	38	9.02	81.39	2.79	5.10	0.55	1.00	1.01
SURVEY # 7601																
	MAR 24/76	760001	10	10	AGE 1	12	74.17	79	70	2.79	7.81	3.56	4.45	2.63	0.51	0.26

Table 15c - Trawl statistics by tow for Cultus Lake

AREA	TRAWL DATE	TOW	DEPTH (m)	DURATION (min)	CATCH SPECIES	N	LENGTH (mm) MEAN	MAX	MIN	S.D.	VAR	WEIGHT (g) MEAN	MAX	MIN	S.D.	VAR
	MAR 24/76	760002	20	20	AGE 1	222	72.15	91	45	7.92	62.67	3.31	6.52	0.94	1.02	1.03
					AGE 2+	1	123.00	123	123	0.00	0.00	15.00	15.00	15.00	0.00	0.00
	MAR 24/76	760003	30	20	AGE 1	186	74.61	88	54	7.26	52.67	4.06	7.33	1.61	1.11	1.24
SURVEY # 7604																
	JUN 8/76	760010	17	20	AGE 0	116	32.16	40	26	2.32	5.40	0.34	0.65	0.15	0.08	0.00
					AGE 1	1	68.00	68	68	0.00	0.00	3.65	3.65	3.65	0.00	0.00
SURVEY # 7606																
	JUL 6/76	760013	18	20	AGE 0	233	41.22	55	30	4.46	19.93	0.82	2.18	0.27	0.30	0.09
	JUL 6/76	760014	22	20	AGE 0	177	43.48	55	32	4.42	19.50	0.83	1.95	0.21	0.31	0.09
SURVEY # 7607																
	AUG 4/76	760015	18	10	AGE 0	59	55.42	69	42	6.45	41.60	1.99	6.25	0.69	0.93	0.86
1	AUG 4/76	760016	25	10	AGE 0	441	57.33	70	41	5.34	28.55	2.09	3.76	0.80	0.59	0.34
SURVEY # 7616																
	SEP 16/76	760042	25	15	AGE 0	177	60.85	80	37	7.22	52.08	2.52	5.68	0.49	0.89	0.79
SURVEY # 7620																
	OCT 6/76	760048	35	10	AGE 0	69	63.59	85	45	7.97	63.46	3.04	7.51	1.06	1.18	1.39
SURVEY # 7623																
	NOV 8/76	760056	35	10	AGE 0	74	69.68	94	40	8.48	71.92	3.92	8.80	0.62	1.38	1.89
	NOV 8/76	760057	30		AGE 0	134	72.27	90	53	7.88	62.06	4.01	7.52	1.44	1.31	1.71
SURVEY # 7701																
2	FEB 16/77	770001	30	15	AGE 1	30	84.50	110	70	7.36	54.18	6.91	15.76	3.90	2.48	6.15

Table 15c - Trawl statistics by tow for Cultus Lake

TRAWL					CATCH		LENGTH (mm)					WEIGHT (g)				
AREA	DATE	TOW	DEPTH (m)	DURATION (min)	SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
2	FEB 16/77	770002	15	15	AGE 1	10	70.40	80	50	9.19	84.44	3.92	5.71	1.48	1.26	1.59
2	FEB 16/77	770003	30	15	AGE 1	252	81.21	112	50	6.58	43.34	5.57	14.62	1.11	1.41	2.00
					AGE 2+	1	83.00	83	83	0.00	0.00	5.76	5.76	5.76	0.00	0.00
2	FEB 16/77	770004	15	15	AGE 1	11	69.82	82	52	9.20	84.69	3.75	5.80	1.46	1.39	1.92
SURVEY # 7703																
	APR 20/77	770010	27	15	AGE 1	44	78.14	96	59	10.09	101.71	5.20	8.71	2.20	1.99	3.95
	APR 20/77	770011	16	15	AGE 1	11	82.64	91	63	7.71	59.50	6.22	7.74	2.52	1.51	2.28
SURVEY # 7704																
1	APR 27/77	770012	15		AGE 0	6	29.00	30	28	0.82	0.67	0.19	0.23	0.15	0.03	0.00
					AGE 1	10	73.90	92	63	7.74	59.89	4.99	9.27	2.65	2.04	4.16
2	APR 27/77	770013	15	10	AGE 0	1	29.00	29	29	0.00	0.00	0.20	0.20	0.20	0.00	0.00
					AGE 1	5	80.40	101	59	15.21	231.44	6.47	11.76	1.96	3.66	13.41
	APR 29/77	770014	10	15	AGE 1	4	78.50	93	60	12.70	161.25	5.44	8.28	2.06	2.44	5.95
SURVEY # 7706																
1	MAY 3/77	770015	40	20	AGE 0	71	28.15	32	26	1.25	1.57	0.18	0.30	0.11	0.04	0.00
SURVEY # 7707																
1	MAY 9/77	770016	12	10	AGE 0	132	28.67	34	26	1.57	2.46	0.19	0.34	0.11	0.05	0.00
					AGE 1	4	69.75	83	53	11.43	130.69	4.08	6.49	1.70	1.78	3.17
SURVEY # 7708																
	JUN 22/77	770017	25	10	AGE 0	118	39.76	47	30	4.07	16.60	0.70	1.22	0.28	0.22	0.05
					AGE 1	4	106.00	110	103	2.74	7.50	13.57	14.30	12.91	0.61	0.37
	JUN 22/77	770018	15	12	AGE 0	154	39.94	50	25	3.99	15.91	0.73	1.55	0.10	0.23	0.05
SURVEY # 7711																

Table 15c - Trawl statistics by tow for Cultus Lake

TRAWL					CATCH		LENGTH (mm)					WEIGHT (g)				
AREA	DATE	TOW	DEPTH (m)	DURATION (min)	SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
	AUG 15/77	770027	28	10	AGE 0	171	63.13	78	45	7.20	51.78	2.92	5.50	0.90	1.00	1.01
					AGE 1	2	120.50	131	110	10.50	110.25	20.85	29.49	12.21	8.64	74.65
	AUG 15/77	770028	30	10	AGE 0	61	64.80	76	34	7.89	62.22	3.18	4.94	0.49	1.02	1.05
					AGE 1	2	115.00	129	101	14.00	196.00	20.18	28.33	12.02	8.15	66.50
SURVEY # 7718																
	SEP 28/77	770045	30	10	AGE 0	120	67.48	83	43	7.86	61.85	3.52	7.92	0.92	1.26	1.59
					AGE 1	1	105.00	105	105	0.00	0.00	12.90	12.90	12.90	0.00	0.00
					SCULPIN	5	35.20	37	30	2.64	6.96	0.63	0.80	0.36	0.16	0.03
	SEP 29/77	770046	35	10	AGE 0	30	68.17	83	43	10.54	111.01	3.87	6.60	0.84	1.54	2.37
					SCULPIN	3	30.67	37	23	5.79	33.56	0.37	0.66	0.12	0.22	0.05
SURVEY # 7801																
2	FEB 6/78	780001	35	10	AGE 1	101	73.96	88	48	7.84	61.48	3.82	6.51	1.02	1.12	1.25
					AGE 2+	2	119.50	121	118	1.50	2.25	15.38	16.75	14.00	1.38	1.89
					SCULPIN	7	36.57	42	30	3.46	11.96	0.54	0.81	0.30	0.15	0.02
					STICKLEBACK	21	45.33	56	34	5.12	26.22	0.94	1.73	0.33	0.33	0.11
2	FEB 6/78	780002	35	10	AGE 1	234	75.92	90	55	6.50	42.26	3.90	6.66	1.40	0.94	0.89
					AGE 2+	1	115.00	115	115	0.00	0.00	11.87	11.87	11.87	0.00	0.00
					SCULPIN	17	42.29	105	33	16.11	259.62	1.77	20.36	0.36	4.65	21.66
					STICKLEBACK	20	44.05	55	31	5.10	26.05	0.79	1.39	0.24	0.27	0.07
1	FEB 6/78	780003	25	10	AGE 1	21	71.05	89	61	7.27	52.90	3.46	6.66	2.10	1.17	1.37
					STICKLEBACK	5	34.00	41	24	6.36	40.40	0.37	0.68	0.09	0.21	0.04
SURVEY # 7802																
1	APR 3/78	780004	20	5	AGE 1	32	73.97	89	53	8.32	69.16	3.91	6.46	1.32	1.13	1.29
					STICKLEBACK	1	49.00	49	49	0.00	0.00	1.03	1.03	1.03	0.00	0.00
2	APR 4/78	780005	20	10	AGE 1	13	75.00	84	63	7.53	56.77	4.10	5.95	2.37	1.19	1.41
					SCULPIN	1	17.00	17	17	0.00	0.00	0.09	0.09	0.09	0.00	0.00
					STICKLEBACK	2	41.00	44	38	3.00	9.00	0.67	0.77	0.56	0.10	0.01
SURVEY # 7806																

Table 15c - Trawl statistics by tow for Cultus Lake

TRAWL					CATCH		LENGTH (mm)					WEIGHT (g)				
AREA	DATE	TOW	DEPTH (m)	DURATION (min)	SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
1	JUN 5/78	780023	14	20	AGE 0	18	31.06	36	26	2.61	6.83	0.29	0.47	0.12	0.09	0.00
					AGE 1	1	78.00	78	78	0.00	0.00	5.08	5.08	5.08	0.00	0.00
					CYPRINID	1	34.00	34	34	0.00	0.00	0.48	0.48	0.48	0.00	0.00
					SCULPIN	4	23.00	38	13	9.97	99.50	0.22	0.64	0.03	0.25	0.06
					STICKLEBACK	2	45.00	49	41	4.00	16.00	0.93	1.20	0.66	0.27	0.07
2	JUN 6/78	780024	12	20	AGE 0	20	29.00	35	23	3.05	9.30	0.25	0.42	0.11	0.09	0.00
					AGE 1	1	79.00	79	79	0.00	0.00	5.31	5.31	5.31	0.00	0.00
					SCULPIN	3	19.33	28	14	6.18	38.22	0.11	0.28	0.02	0.12	0.01
SURVEY # 7812																
1	AUG 2/78	780059	18	10	AGE 0	17	51.41	59	40	4.07	16.60	1.57	2.40	0.79	0.41	0.17
					CYPRINID	4	16.25	17	16	0.43	0.19	0.08	0.09	0.06	0.01	0.00
					SCULPIN	3	29.33	39	17	9.18	84.22	0.48	0.90	0.09	0.33	0.11
2	AUG 2/78	780060	17	10	AGE 0	16	48.06	55	40	4.59	21.06	1.37	2.08	0.77	0.38	0.15
					CYPRINID	1	44.00	44	44	0.00	0.00	1.19	1.19	1.19	0.00	0.00
					SCULPIN	2	24.50	29	20	4.50	20.25	0.30	0.41	0.19	0.11	0.02
SURVEY # 7914																
1	JUL 25/79	790061	22	5	AGE 0	230	51.29	74	25	9.42	88.65	1.78	4.60	0.13	0.85	0.72
					CYPRINID	1	16.00	16	16	0.00	0.00	0.10	0.10	0.10	0.00	0.00
					SCULPIN	11	24.45	34	11	5.98	35.70	0.22	0.56	0.05	0.13	0.02
					STICKLEBACK	4	38.00	40	35	2.12	4.50	0.58	0.74	0.39	0.12	0.02
1	JUL 25/79	790062	15	5	AGE 0	129	45.40	67	20	9.64	92.86	1.26	3.93	0.04	0.73	0.53
					CYPRINID	3	56.67	66	50	6.80	46.22	2.94	5.03	1.67	1.49	2.21
					SCULPIN	5	24.80	32	20	4.66	21.76	0.22	0.41	0.11	0.11	0.01
2	JUL 26/79	790063	22	5	AGE 0	245	49.02	70	26	8.15	66.46	1.47	4.04	0.12	0.71	0.51
					CYPRINID	1	48.00	48	48	0.00	0.00	1.82	1.82	1.82	0.00	0.00
					SCULPIN	9	17.00	27	10	6.77	45.78	0.09	0.27	1.E-2	0.10	0.00
					STICKLEBACK	1	49.00	49	49	0.00	0.00	1.42	1.42	1.42	0.00	0.00
SURVEY # 7922																
1	NOV 15/79	790117	30	5	AGE 0	150	62.88	94	33	11.22	125.79	2.79	8.27	0.38	1.41	1.99

Table 15c - Trawl statistics by tow for Cultus Lake

TRAWL					CATCH		LENGTH (mm)					WEIGHT (g)				
AREA	DATE	TOW	DEPTH (m)	DURATION (min)	SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
					SCULPIN	1	27.00	27	27	0.00	0.00	0.23	0.23	0.23	0.00	0.00
2	NOV 15/79	790118	30	5	AGE 0	55	65.04	85	45	9.71	94.25	3.13	6.92	0.97	1.32	1.75
					SCULPIN	3	25.33	33	20	5.56	30.89	0.21	0.48	0.08	0.19	0.04
SURVEY # 8001																
2	FEB 6/80	800001	22	5	AGE 1	67	74.55	87	54	7.30	53.29	4.04	6.44	1.51	1.12	1.26
					AGE 2+	1	170.00	170	170	0.00	0.00	62.45	62.45	62.45	0.00	0.00
					STICKLEBACK	7	44.86	47	40	2.10	4.41	0.90	0.99	0.69	0.09	0.00
1	FEB 6/80	800002	30	5	AGE 1	54	76.26	95	52	10.58	111.90	4.40	8.44	1.08	1.78	3.17
					SCULPIN	3	85.33	132	36	39.24	1539.56	11.86	27.77	0.57	11.57	133.98
					STICKLEBACK	7	44.57	52	36	5.31	28.24	0.85	1.35	0.43	0.29	0.08
1	FEB 6/80	800003	15	5	AGE 1	26	68.12	85	47	9.37	87.87	3.25	6.00	1.14	1.20	1.44
					STICKLEBACK	24	41.08	54	23	6.77	45.83	0.74	1.38	0.11	0.31	0.10
SURVEY # 8004																
2	MAR 5/80	800010	15	10	AGE 1	77	71.96	95	41	10.85	117.75	3.51	7.46	0.70	1.42	2.02
					SCULPIN	2	38.50	39	38	0.50	0.25	0.81	0.87	0.75	0.06	0.00
					STICKLEBACK	6	42.17	49	39	3.34	11.14	0.81	1.20	0.59	0.20	0.04
SURVEY # 8007																
1	JUL 24/80	800028	30	2	AGE 0	78	42.92	63	25	9.29	86.28	1.12	2.80	0.14	0.69	0.48
					AGE 1	2	97.00	98	96	1.00	1.00	12.35	12.94	11.77	0.58	0.34
					SCULPIN	1	35.00	35	35	0.00	0.00	0.55	0.55	0.55	0.00	0.00
2	JUL 25/80	800029	15	5	AGE 0	101	38.55	57	25	8.29	68.66	0.75	2.32	0.16	0.51	0.26
					OTHER	1	64.00	64	64	0.00	0.00	4.42	4.42	4.42	0.00	0.00
SURVEY # 8015																
2	OCT 30/80	800066	22	10	AGE 0	54	54.70	72	34	8.80	77.36	1.95	8.70	0.39	1.23	1.52
					SCULPIN	5	26.60	35	18	5.95	35.44	0.23	0.53	0.02	0.17	0.03
					STICKLEBACK	4	39.50	44	37	2.69	7.25	0.64	0.87	0.43	0.19	0.04
2	OCT 30/80	800067	30	5	AGE 0	72	57.63	78	34	9.44	89.07	2.02	4.64	0.32	0.92	0.84

Table 15c - Trawl statistics by tow for Cultus Lake

TRAWL					CATCH		LENGTH (mm)					WEIGHT (g)				
AREA	DATE	TOW	DEPTH (m)	DURATION (min)	SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
					AGE 1	1	146.00	146	146	0.00	0.00	35.05	35.05	35.05	0.00	0.00
					SCULPIN	11	42.82	68	13	17.74	314.69	1.30	2.98	0.03	1.01	1.02
					STICKLEBACK	1	40.00	40	40	0.00	0.00	0.83	0.83	0.83	0.00	0.00
1	OCT 30/80	800068	30	3	AGE 0	139	62.58	85	34	9.27	85.90	2.57	6.75	0.37	1.18	1.40
					AGE 1	1	132.00	132	132	0.00	0.00	25.07	25.07	25.07	0.00	0.00
					OTHER	1	28.00	28	28	0.00	0.00	0.19	0.19	0.19	0.00	0.00
					SCULPIN	4	25.50	32	18	5.41	29.25	0.19	0.34	0.04	0.12	0.02
					STICKLEBACK	6	41.17	46	37	3.02	9.14	0.74	0.96	0.50	0.16	0.03
SURVEY # 8101																
1	MAR 24/81	810001	22	10	AGE 1	92	62.88	105	43	11.08	122.78	2.83	11.32	0.71	1.68	2.82
					AGE 2+	9	133.67	148	120	8.19	67.11	24.75	34.85	16.26	5.86	34.30
					SCULPIN	1	37.00	37	37	0.00	0.00	0.60	0.60	0.60	0.00	0.00
2	MAR 25/81	810002	30	1	AGE 1	108	66.30	88	44	9.49	90.06	3.09	7.15	0.97	1.32	1.75
SURVEY # 8102																
2	MAY 12/81	810003	30	20	AGE 1	5	62.00	77	55	7.72	59.60	2.89	5.41	1.83	1.28	1.65
					SCULPIN	12	35.92	44	21	6.68	44.58	0.58	0.93	0.06	0.28	0.08
					STICKLEBACK	3	53.33	58	50	3.40	11.56	1.62	2.06	1.29	0.32	0.11
1	MAY 13/81	810004	7	10	AGE 0	24	25.92	30	23	1.66	2.74	0.18	0.32	0.11	0.05	0.00
					AGE 1	1	61.00	61	61	0.00	0.00	2.42	2.42	2.42	0.00	0.00
SURVEY # 8103																
2	JUN 9/81	810005	22	10	AGE 0	11	31.82	37	26	3.16	9.97	0.33	0.55	0.15	0.11	0.01
					AGE 1	5	68.60	78	60	6.86	47.04	3.67	5.11	2.46	1.09	1.19
					AGE 2+	2	159.00	160	158	1.00	1.00	54.91	56.86	52.96	1.95	3.80
1	JUN 10/81	810006	15	15	AGE 0	10	31.20	34	26	2.48	6.16	0.34	0.44	0.20	0.08	0.00
					AGE 1	7	70.71	82	59	7.00	49.06	4.02	5.68	2.47	1.02	1.03
					SCULPIN	6	35.17	43	29	5.30	28.14	0.53	0.89	0.26	0.24	0.06
SURVEY # 8106																

Table 15c - Trawl statistics by tow for Cultus Lake

AREA	DATE	TOW	DEPTH (m)	DURATION (min)	SPECIES	N	LENGTH (mm) MEAN	MAX	MIN	S.D.	VAR	WEIGHT (g) MEAN	MAX	MIN	S.D.	VAR
1	AUG 13/81	810014	31	5	AGE 0	4	49.00	56	41	6.20	38.50	1.46	2.01	0.90	0.51	0.26
					AGE 1	3	93.33	98	87	4.64	21.56	10.51	12.26	9.63	1.24	1.53
					SCULPIN	5	35.40	42	28	5.35	28.64	0.48	0.78	0.23	0.22	0.05
2	AUG 14/81	810015	19	10	AGE 0	1	37.00	37	37	0.00	0.00	0.55	0.55	0.55	0.00	0.00
					AGE 1	1	118.00	118	118	0.00	0.00	19.94	19.94	19.94	0.00	0.00
SURVEY # 8111																
2	SEP 8/81	810032	31	5	AGE 0	15	55.00	63	44	5.56	30.93	1.87	3.00	0.91	0.57	0.32
					AGE 1	10	101.90	118	89	8.15	66.49	12.66	18.83	8.12	3.11	9.69
					CYPRINID	1	22.00	22	22	0.00	0.00	0.13	0.13	0.13	0.00	0.00
					SCULPIN	3	32.67	37	29	3.30	10.89	0.41	0.61	0.29	0.14	0.02
1	SEP 9/81	810033	31	5	AGE 0	1	54.00	54	54	0.00	0.00	1.73	1.73	1.73	0.00	0.00
					AGE 1	3	106.33	107	106	0.47	0.22	14.67	14.99	14.29	0.29	0.08
					CYPRINID	1	21.00	21	21	0.00	0.00	0.08	0.08	0.08	0.00	0.00
					SCULPIN	2	30.00	35	25	5.00	25.00	0.33	0.48	0.18	0.15	0.02
SURVEY # 8115																
1	NOV 26/81	810043	25	10	AGE 0	9	68.67	82	49	9.18	84.22	3.88	6.04	1.52	1.23	1.52
					AGE 1	2	98.00	100	96	2.00	4.00	9.81	9.90	9.73	0.09	0.00
					SCULPIN	1	35.00	35	35	0.00	0.00	0.52	0.52	0.52	0.00	0.00
					STICKLEBACK	28	45.64	60	34	6.48	41.94	0.98	2.05	0.38	0.42	0.17
2	NOV 27/81	810044	31	8	AGE 0	10	68.70	80	62	5.71	32.61	3.53	5.05	2.24	0.92	0.84
					AGE 1	12	104.67	125	93	9.59	92.06	12.61	22.04	8.55	4.08	16.67
					SCULPIN	32	31.81	48	18	7.57	57.28	0.44	1.45	0.03	0.33	0.11
					STICKLEBACK	26	43.00	53	28	5.70	32.54	0.85	1.65	0.20	0.34	0.11
SURVEY # 8202																
1	JUL 5/82	820005	7	1	SCULPIN	17	12.47	14	10	1.14	1.31	0.02	0.05	0.02	0.01	0.00
2	JUL 6/82	820006	13	10	AGE 0	55	46.84	57	28	4.88	23.85	1.32	2.29	0.34	0.37	0.13
					CYPRINID	1	43.00	43	43	0.00	0.00	1.32	1.32	1.32	0.00	0.00
					SCULPIN	6	34.50	47	12	11.84	140.25	0.69	1.27	0.03	0.43	0.18

Table 15c - Trawl statistics by tow for Cultus Lake

TRAWL					CATCH		LENGTH (mm)					WEIGHT (g)				
AREA	DATE	TOW	DEPTH (m)	DURATION (min)	SPECIES	N	MEAN	MAX	MIN	S.D.	VAR	MEAN	MAX	MIN	S.D.	VAR
SURVEY # 8301																
1	JUL 11/83	830001	13	3	AGE 0	121	40.50	54	30	5.11	26.08	0.83	1.99	0.27	0.37	0.13
					SCULPIN	1	30.00	30	30	0.00	0.00	0.29	0.29	0.29	0.00	0.00
1	JUL 11/83	830002	25	5	AGE 0	66	47.03	65	31	7.41	54.97	1.33	3.41	0.30	0.67	0.45
					CYPRINID	1	60.00	60	60	0.00	0.00	3.07	3.07	3.07	0.00	0.00
					SCULPIN	9	33.89	41	29	3.48	12.10	0.48	0.71	0.30	0.13	0.02
2	JUL 12/83	830003	25	2	AGE 0	209	46.83	64	28	7.02	49.24	1.19	2.83	0.30	0.53	0.29
					AGE 1	1	71.00	71	71	0.00	0.00	4.11	4.11	4.11	0.00	0.00
					CYPRINID	1	49.00	49	49	0.00	0.00	1.70	1.70	1.70	0.00	0.00
					SCULPIN	5	32.00	40	27	5.10	26.00	0.52	0.78	0.30	0.18	0.03
SURVEY # 8401																
2	FEB 22/84	840001	7	5	AGE 1	76	70.03	93	49	6.54	42.74	3.22	7.84	0.26	1.12	1.26
					STICKLEBACK	3	41.33	51	32	7.76	60.22	0.72	1.19	0.29	0.37	0.14
2	FEB 22/84	840002	25	5	AGE 1	52	74.17	93	56	7.03	49.49	3.90	6.96	1.50	1.05	1.10
					SCULPIN	1	37.00	37	37	0.00	0.00	0.45	0.45	0.45	0.00	0.00
					STICKLEBACK	4	40.75	47	28	7.76	60.19	0.65	0.96	0.21	0.28	0.08
2	FEB 22/84	840003	31	3	AGE 1	63	73.54	94	53	6.02	36.28	3.85	7.40	2.45	0.93	0.87
1	FEB 22/84	840004	31	3	AGE 1	43	74.35	89	50	7.47	55.86	3.82	6.22	1.07	1.05	1.10
					AGE 2+	1	180.00	180	180	0.00	0.00	61.80	61.80	61.80	0.00	0.00
1	FEB 22/84	840005	13	4	AGE 1	86	71.91	93	45	7.33	53.74	3.47	7.14	0.68	1.01	1.03
					AGE 2+	1	130.00	130	130	0.00	0.00	22.64	22.64	22.64	0.00	0.00
					STICKLEBACK	1	48.00	48	48	0.00	0.00	0.79	0.79	0.79	0.00	0.00
1	FEB 22/84	840006	19	3	AGE 1	115	72.21	88	51	7.16	51.23	3.56	6.89	0.90	1.09	1.19
					CYPRINID	1	120.00	120	120	0.00	0.00	15.88	15.88	15.88	0.00	0.00
					STICKLEBACK	4	45.50	51	38	4.82	23.25	0.81	0.99	0.56	0.18	0.03

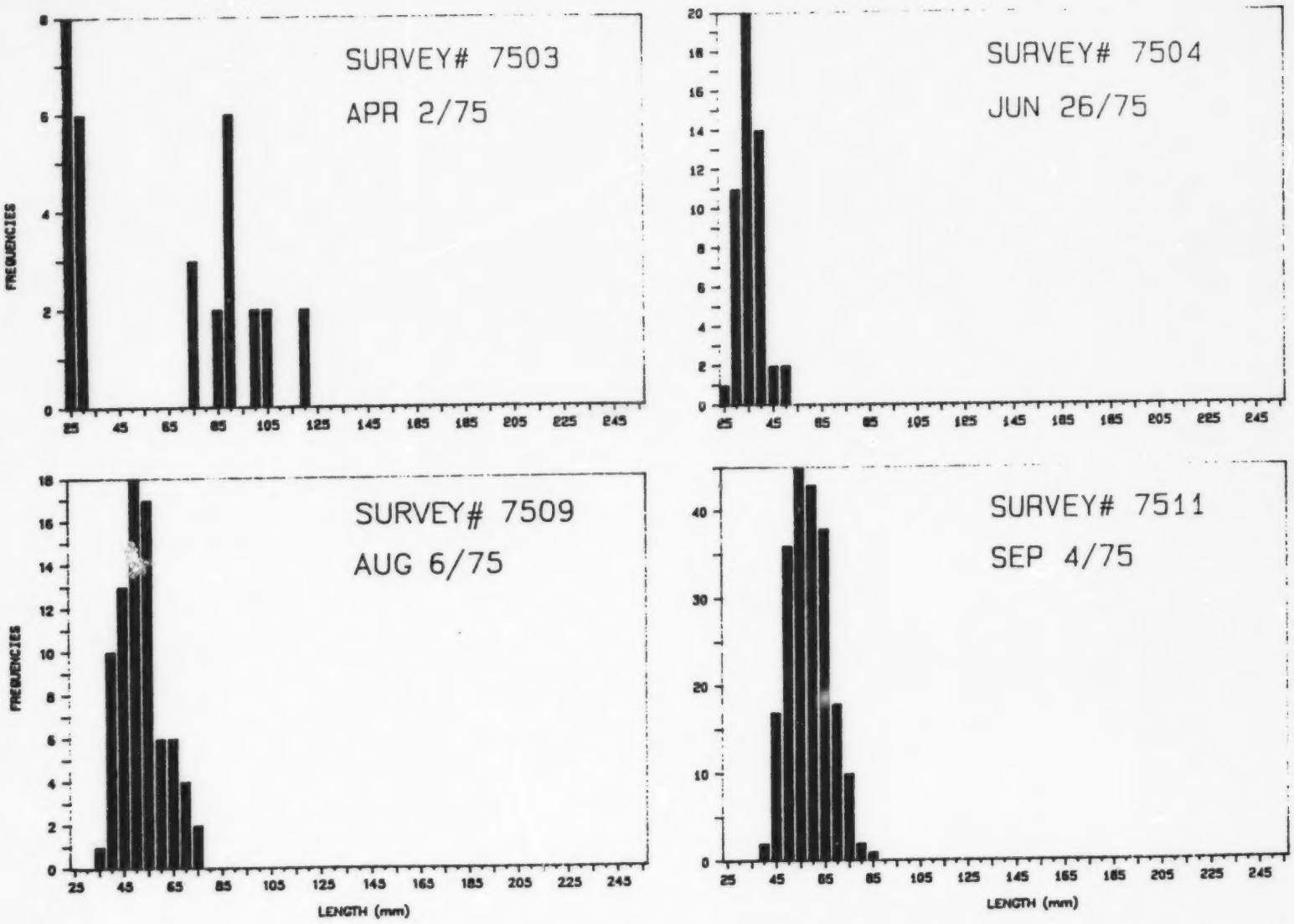


Fig. 29a. Sockeye (O. nerka) length frequencies in Cultus Lake.

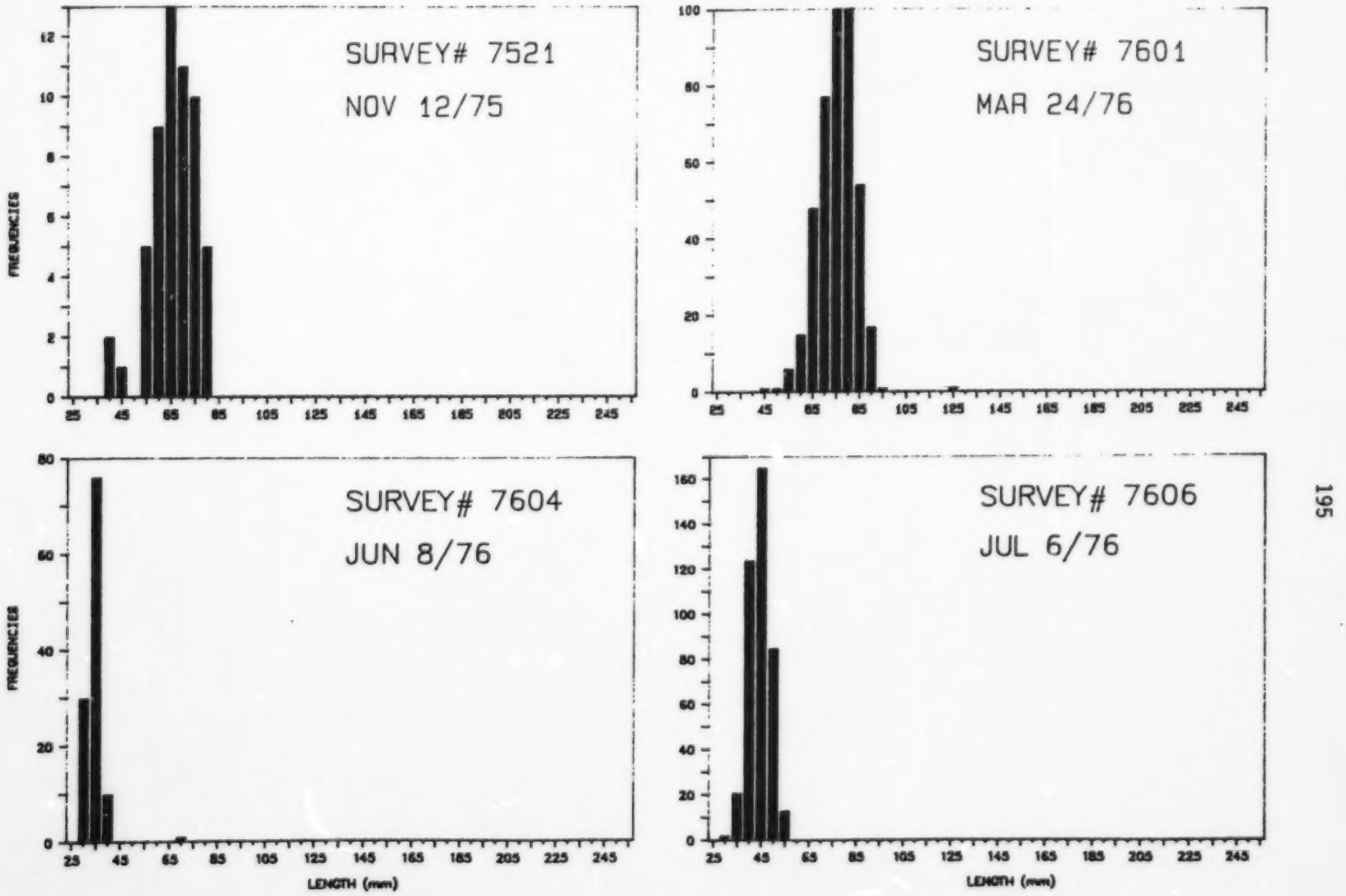


Fig. 29a. Continued.

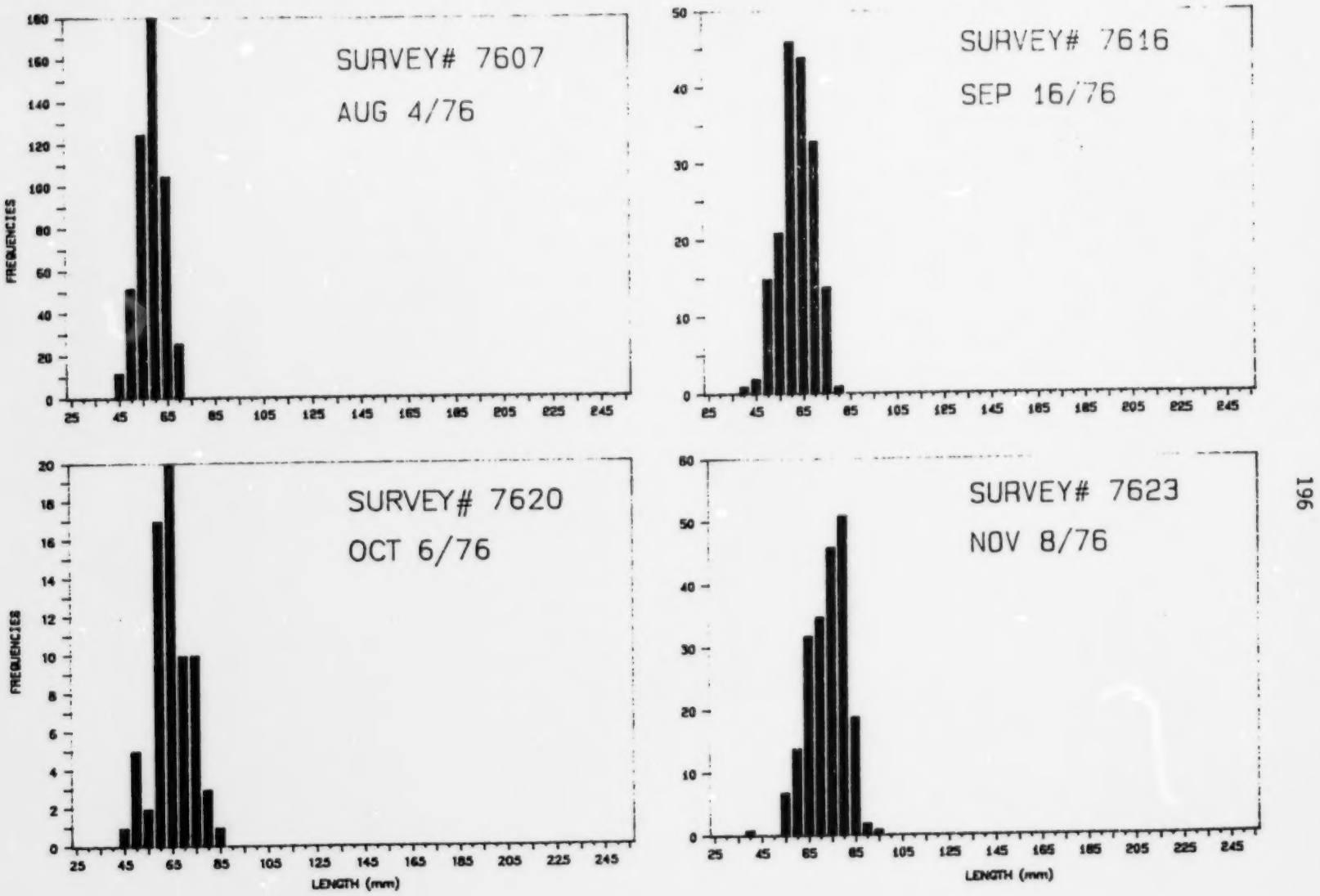


Fig. 29a. Continued.

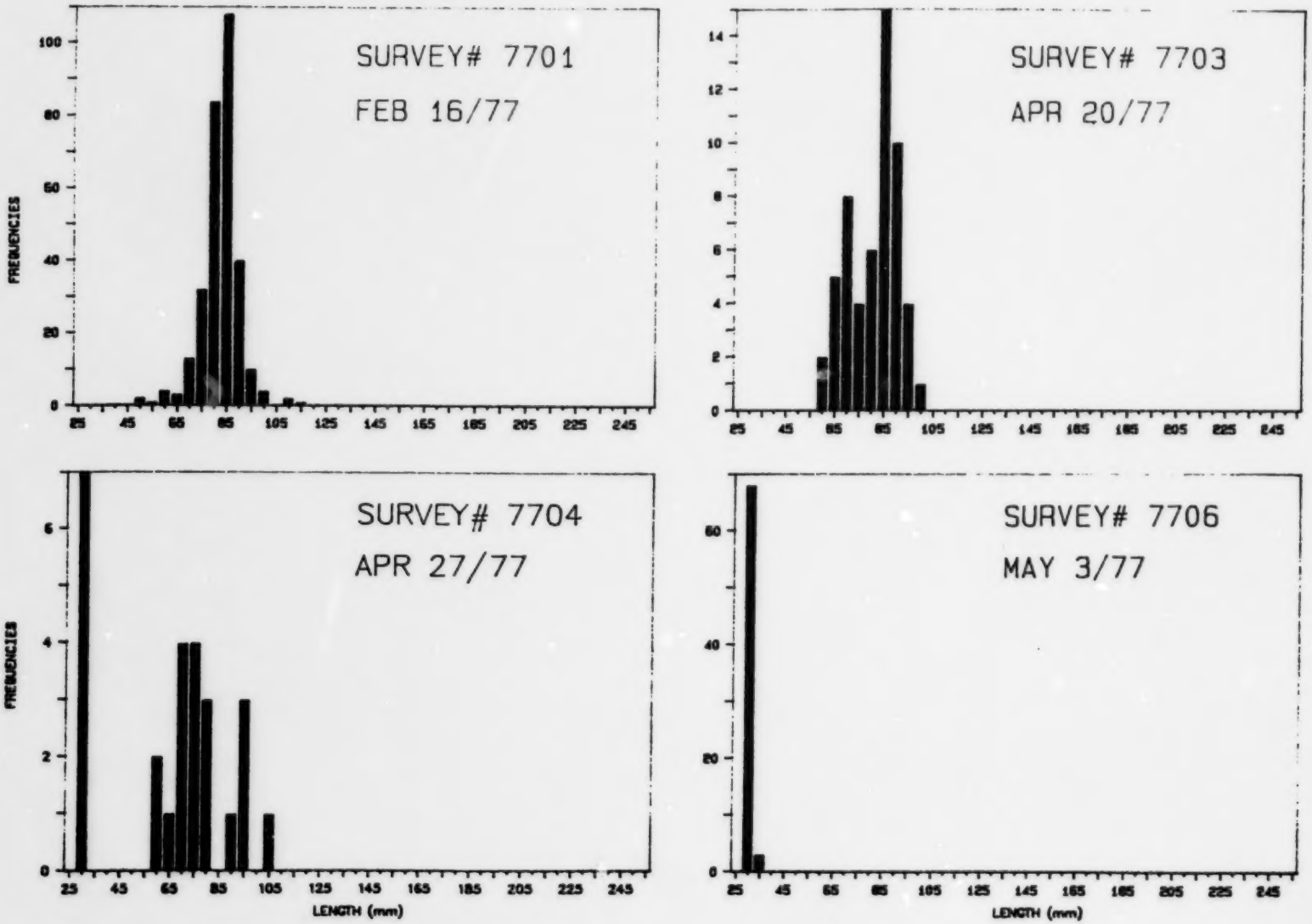


Fig. 29a. Continued.

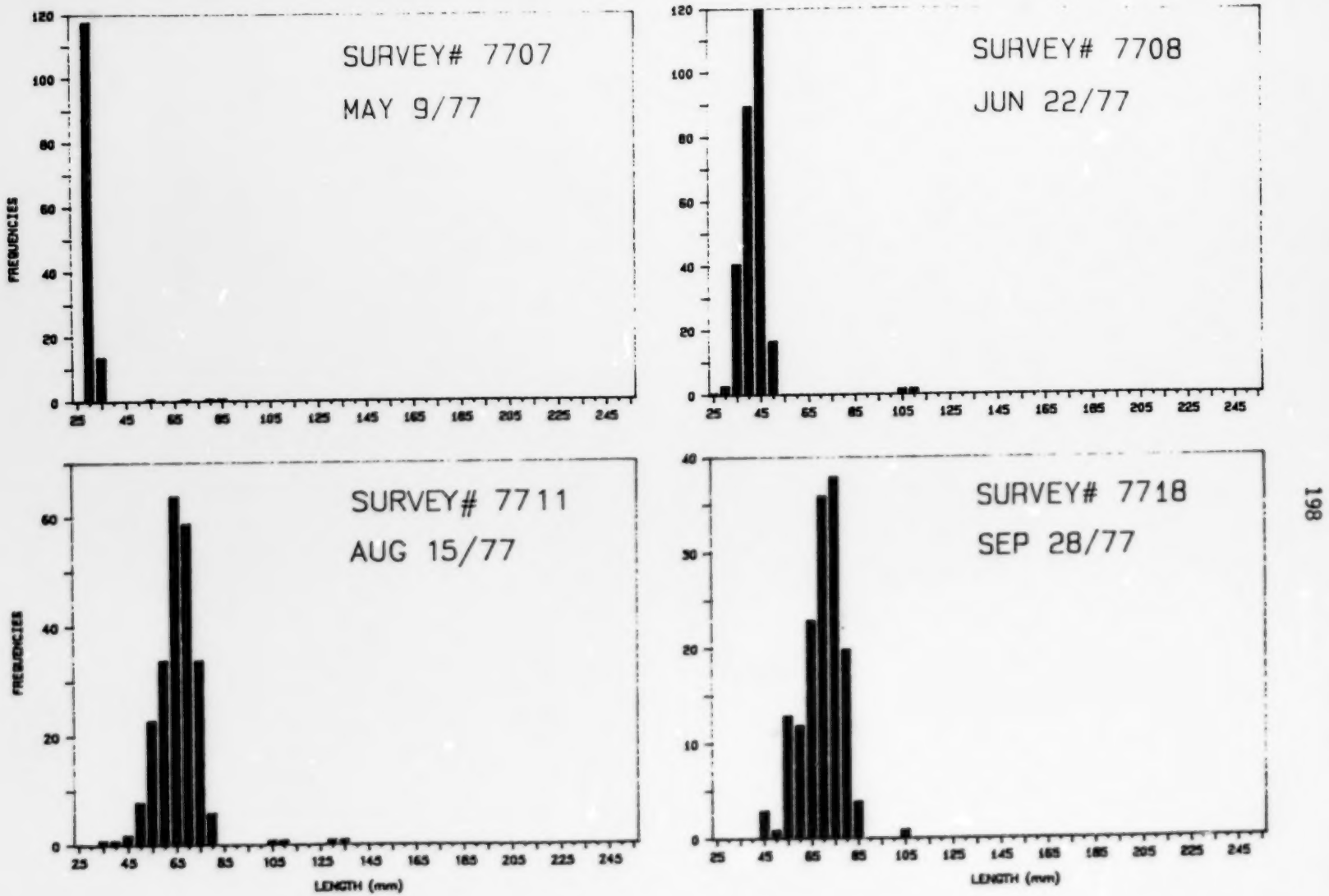


Fig. 29a. Continued.

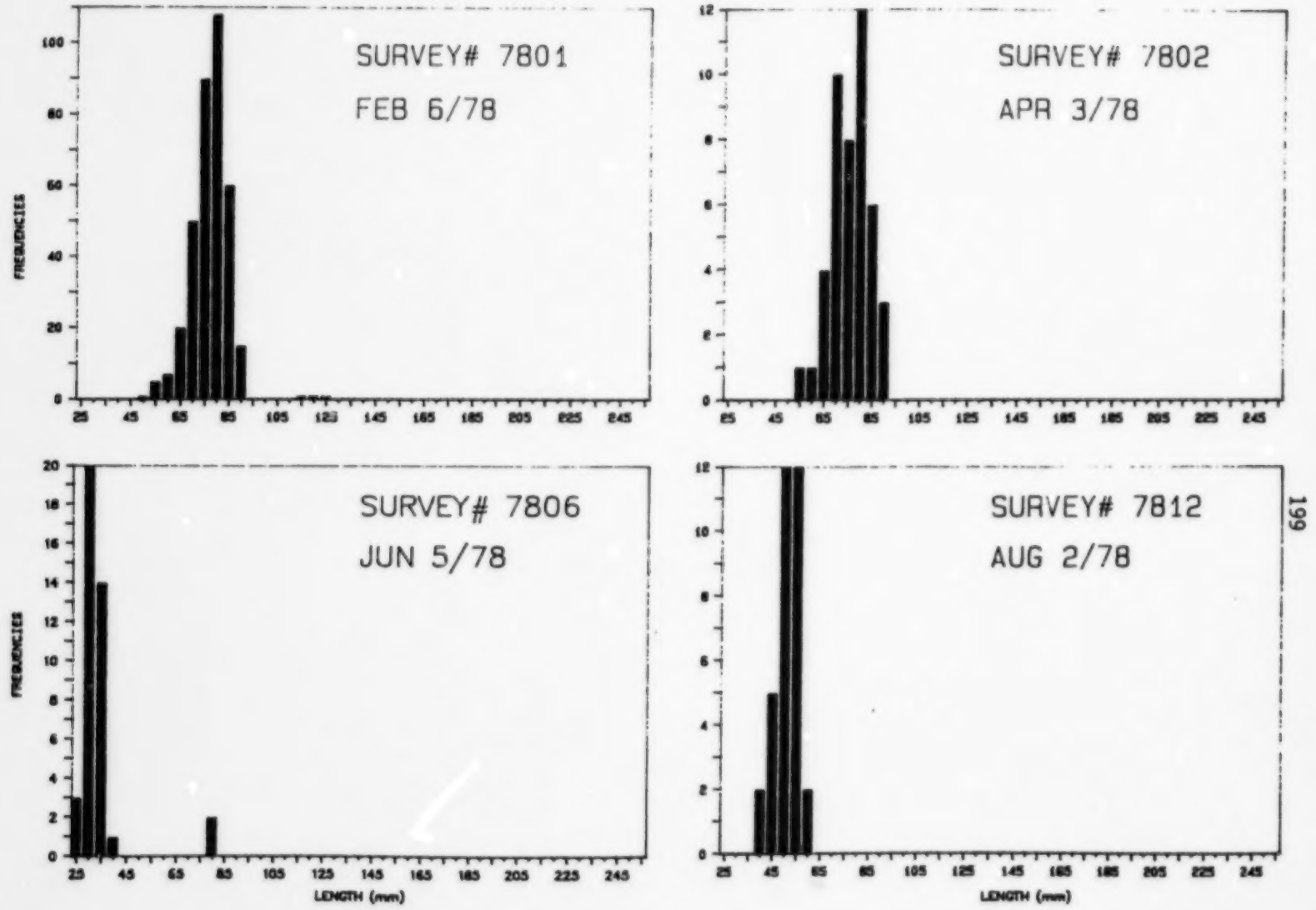


Fig. 29a. Continued.

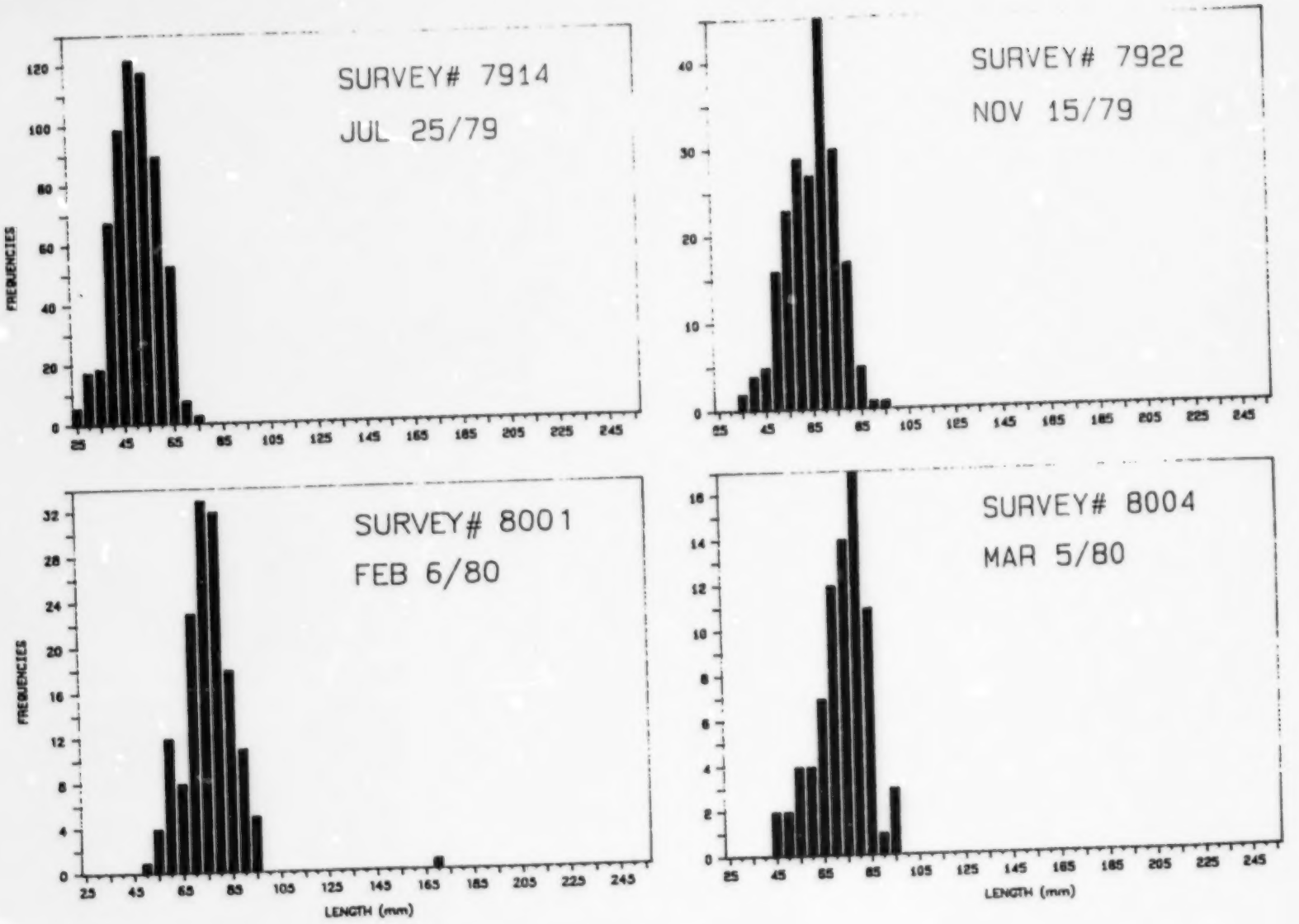


Fig. 29a. Continued.

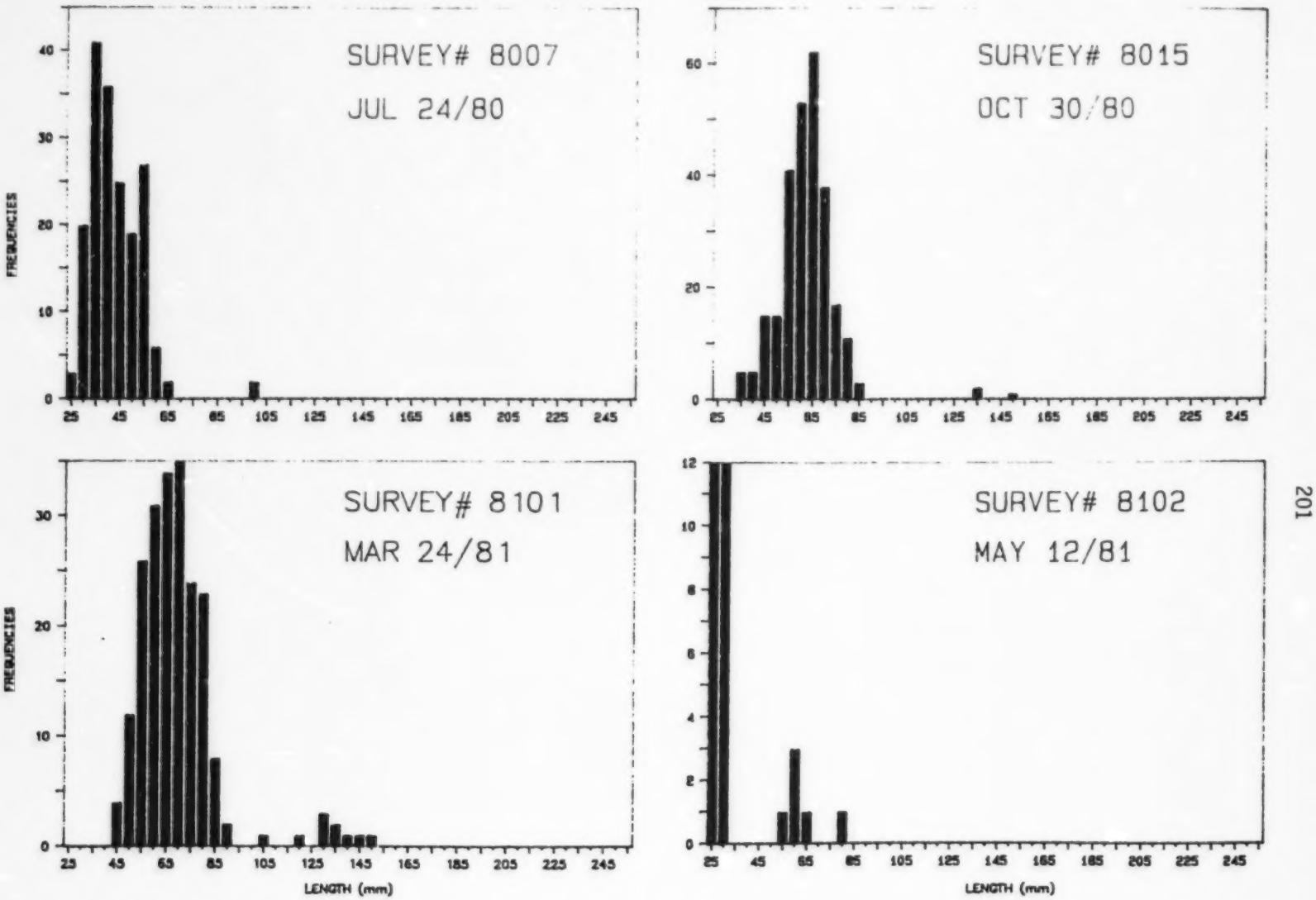


Fig. 29a. Continued.

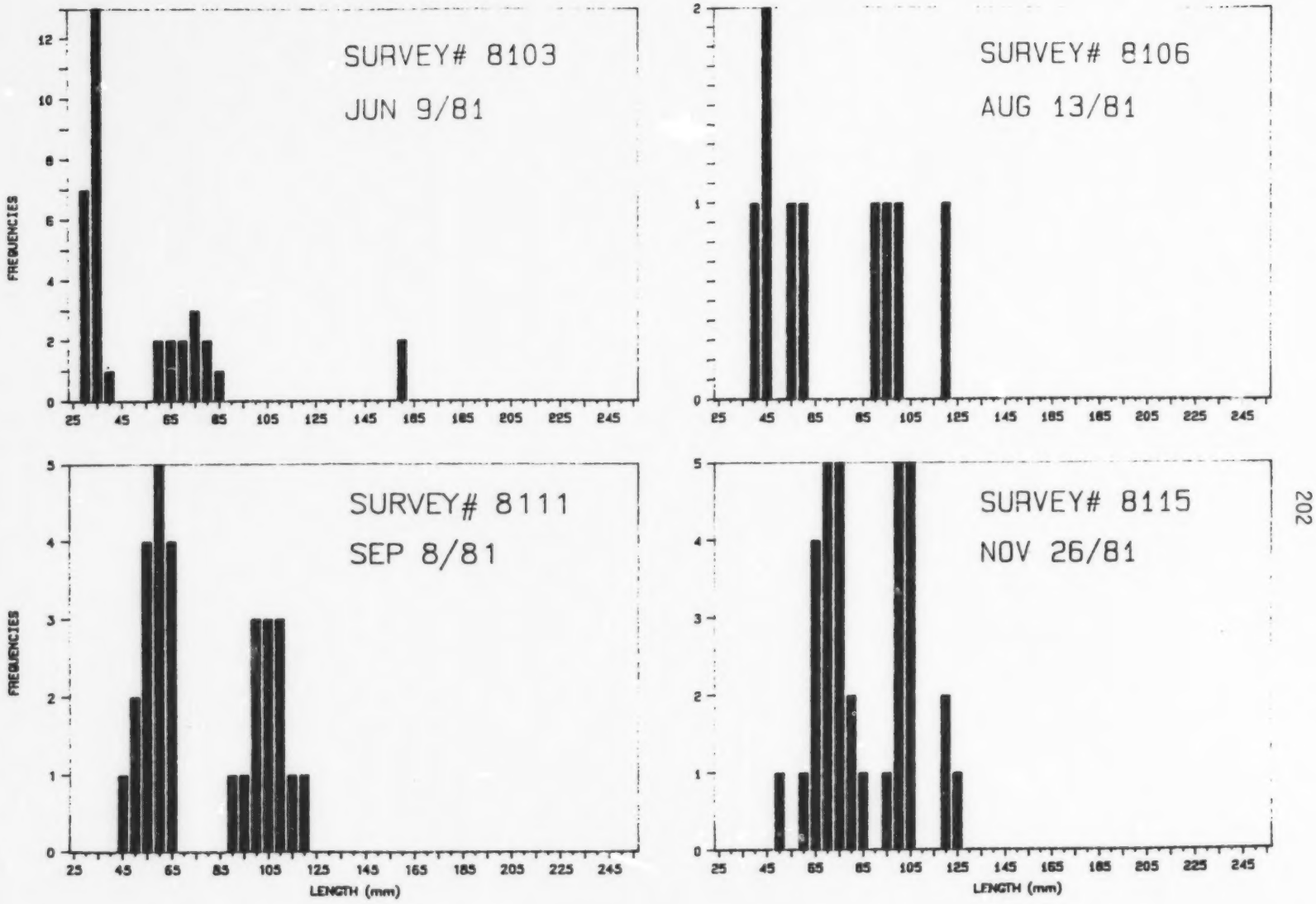
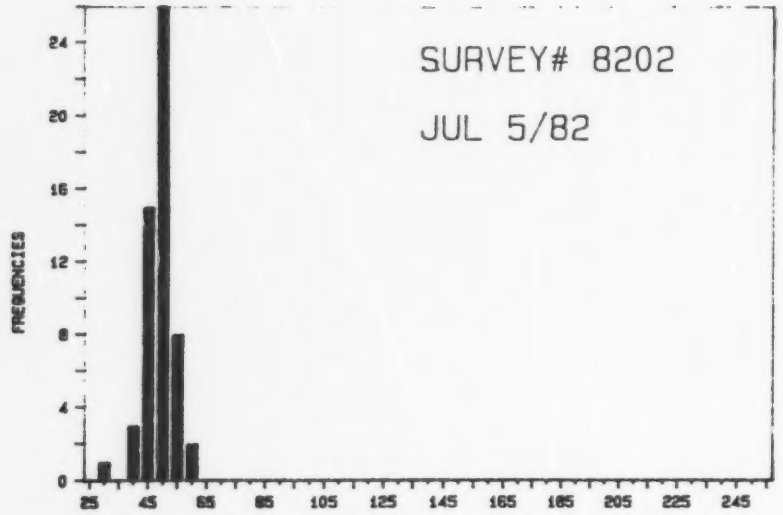
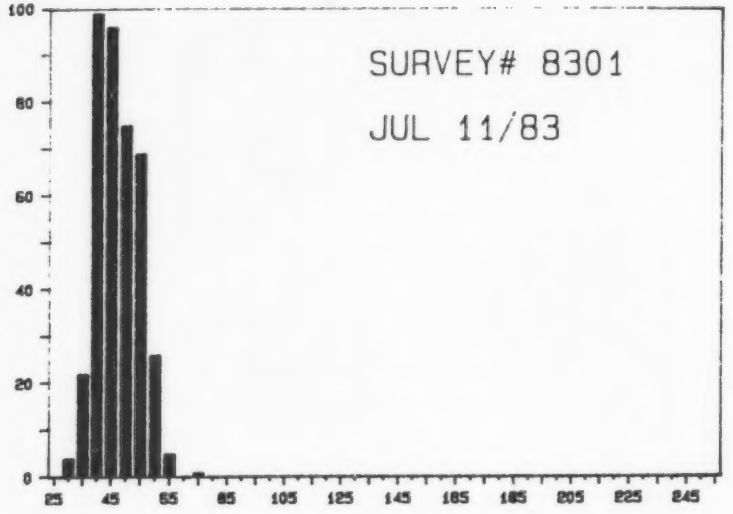


Fig. 29a. Continued.





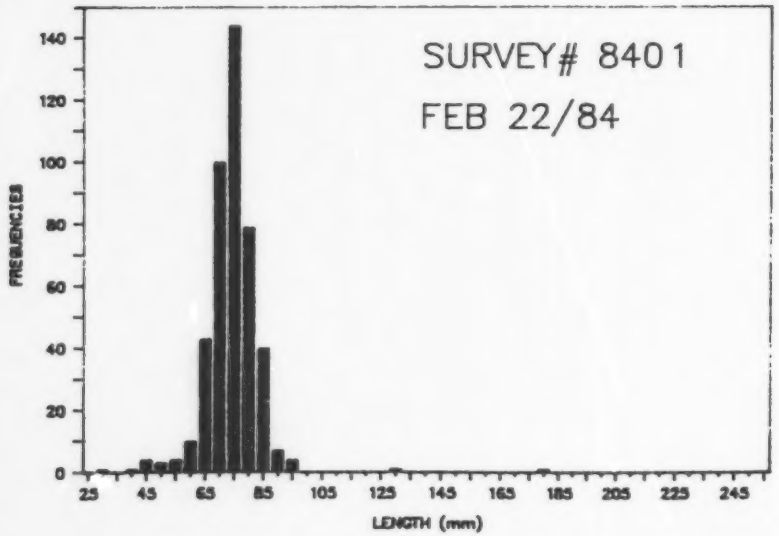


Fig. 29a. Continued.

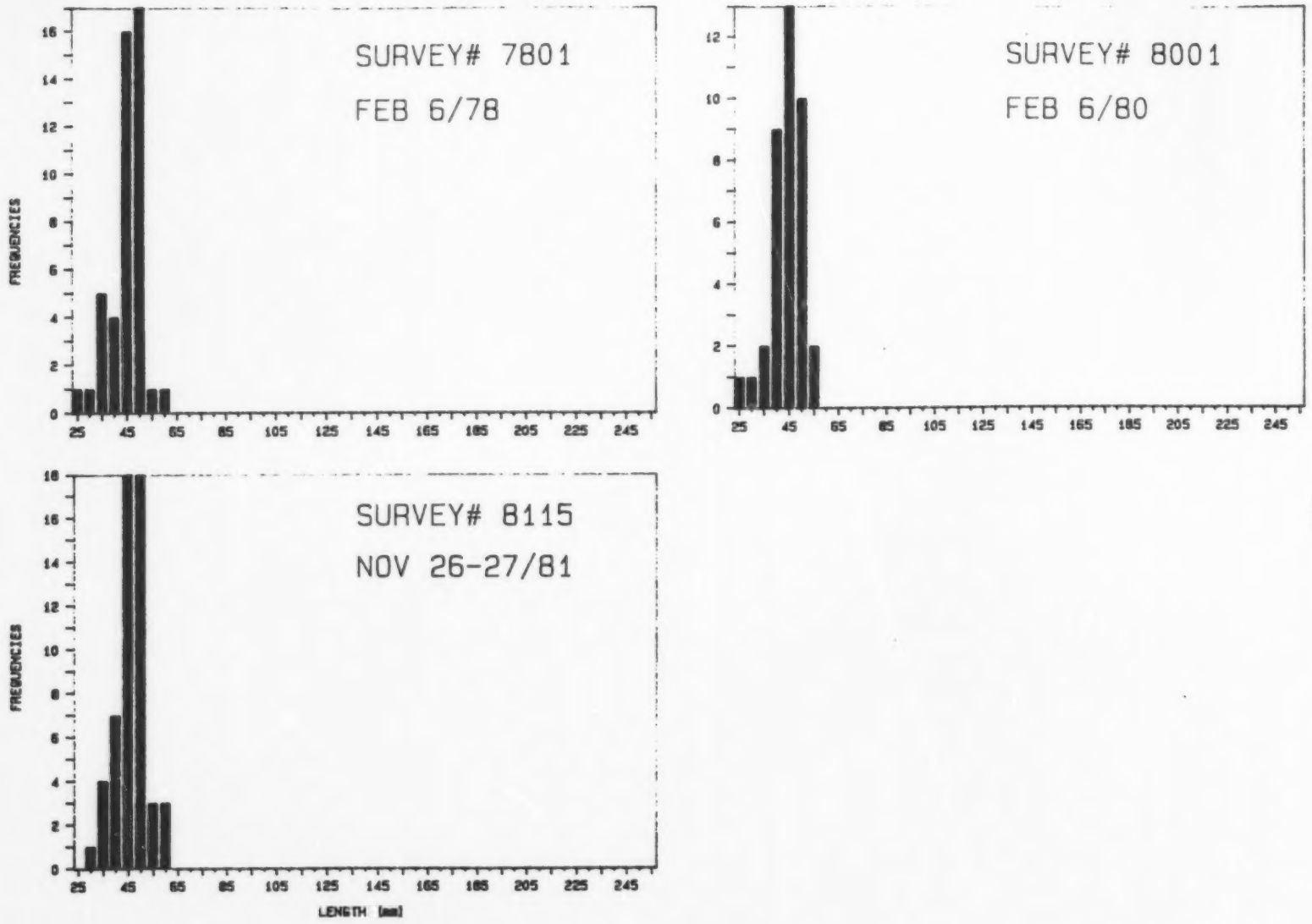


Fig. 29b. Stickleback (G. aculeatus) length frequencies in Cultus Lake.